



CLIMATE WORLDWIDE

Teaching notes

Pluvia Loriente

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UNIT 1: WEATHER PATTERNS			
Lessons	Title	Student's worksheets	Supplementary material
LESSON 1	Weather & climate	WS-1A & WS-1B	SM- Weather pictures SM- Weather cards SM- PPT
LESSON 2	Climates & places	WS-2 WS-3	SM- Weather song SM- Power Point SM- Travel cards
LESSON 3	Climate zones around the Earth (Part 1)	WS-4 WS-5	SM-PPT
LESSON 4	Climate zones around the Earth (Part 2)	WS-7 WS-8	SM-PPT SM-Climate map SM-Assessment
UNIT 2: CLIMATE & LIFE AROUND THE WORLD			
LESSON 1	Weather patterns; Polar, Temperate and Tropical (Part 1)	WS-9	SM-Images SM-Sentences SM-PPT
LESSON 2	Weather patterns; world weather reports (Part 2)	WS-10 WS-11A WS-11B	SM-Data supplied SM-PPT graph
LESSON 3	Main features of the World Climates	WS-12A,B,C,D,E,F	SM-UNIT2les.1-Images SM-Cards SM-Climates Dictation
LESSON 4	Effects of climate on landscape and people	WS-13A,B,C,D,E,F WS-14	SM-PPT SM-Facts SM- Book
LESSON 5	Extreme climate regions: Polar and Desert regions (Part 1)	WS-15 WS-16A and B	SM-Cards SM-PPTCards SM-PPT
LESSON 6	Extreme climate regions: Polar and Desert regions (Part 2)	WS-17A,B andC WS-18	SM-Matching cards SM-PPTQuiz SM-Assessment
UNIT 3: CLIMATES & LIFE IN SPAIN			
LESSON 1	Types of climate in Spain	WS-19 WS-20Aand 20B	SM-Puzzels&maps SM-Cards
LESSON 2	Comparing different climates.	WS-21 WS-22	SM-Cards
LESSON 3	Effects of climate on landscape in Spain	WS-23	SM-Song SM-PPT
LESSON 4	Global Warming: Climate Change (Part 1)	WS-24 (steps 1,2 and3) WS-26 A,B,C,D,E,F	SM-PPT-Average SM-PPT
LESSON 5	Global Warming: Climate Change (Part 2)	WS-27 WS-28 A,B and C WS-29	SM-PPT SM- Assessment

UNIT: 1	WEATHER PATTERNS	Sessions: 4	Time:4h.
Lesson: 1	Weather & Climate		1h.
<p>LEARNING TARGETS: In this lesson children should understand the concept of climate. They should discover what climate and weather have in common and what the differences are.</p>			
<p>ACTIVITY 1:(Plenary) "warm up" Ask children "What's the weather like today?" Students: It's _____ Teacher: So, here in.... the weather is _____ , but what about the weather in these places? Pictures showing different weather in different places should be put on the wall. Ask children to point to a place where it rains etc...Then point to a picture and ask individual children: What's the weather like in picture number 1,2....4.....? (SM-UNIT1lesson1-Weather pictures) Where do you think it is?</p>			
<p>ACTIVITY 2: (In fours) Hand out the set of cards (SM-UNIT1lesson1-Cards), provided in the teachers' resources section, to each group of four and ask students to classify them into two groups and agree on the criteria. Write two headings on the board: WEATHER/ CLIMATE and ask students to classify the cards under this criteria, first in groups and then on the board. Ask them why they think you have chosen these criteria. Explain that weather is made up of different things; precipitation, temperature, winds, sunshine, clouds, visibility etc., while climate is the observed and recorded weather conditions of a specific place over many years.</p>			
<p>ACTIVITY 3: (in pairs) "Complete a weekly temperature graph" Give out a different worksheet to each student with two unfinished graphs on it, provided in the students' worksheet (WS-1A and WS-1B) and tell them not to show their partner the graph. They work in pairs, student A has student B's missing information and student B has student A's missing information. Each one has a different worksheet with two unfinished graphs. They complete the missing information in their graphs by asking each other in turns. Student A: -How much rain is there on Monday? Student B: -There is 23, 34 etc...mm. (millilitres)</p>			

Student A: - What's the temperature on Saturday?

Student B: - It is 25°C, 22°C... degrees

Write on the board questions like:

What was	the coldest the hottest the wettest driest	day?
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When students have finished asking the questions, encourage them to ask each other.

ACTIVITY 4: (Plenary) "Slideshow conclusion"

Show slides one by one (SM-UNIT1lesson1-PPT) provided in the Supplementary material section, ask the question and let students guess the answer. Review basic weather vocabulary.

RESOURCES:

- Weather pictures(SM-UNIT1lesson1)
- Cards graphs and weather conditions. (SM-UNIT1lesson1)
- Worksheet (WS-1A andWS-1B)
- Power point presentation (SM-pptUNIT1lesson1)

WS = Students' Worksheets SM = Supplementary Material Section
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UNIT: 1	WEATHER PATTERNS	Sessions: 4	Time:4h.
Lesson: 2	Climates and Places		1h.
LEARNING TARGETS: In this lesson children should learn about different weather conditions in some places.			
<p>ACTIVITY 1 : (Plenary) "Warm up" Brain storm weather words Write on the board WEATHER and encourage students to say all the weather words they know, write them around the heading and add the vocabulary you want to focus on with the song provided in (SM-UNIT1lesson2-Weather Song)</p>			
<p>ACTIVITY 2: "Weather words in a song" Give students a piece of paper and ask them to write down one word in big capital letters. Tell them they have to raise their word when they hear it. You can either read the song provided or try to go to these websites: http://www.youtube.com/watch?v=uriObwm6S6Q http://www.multimedia-english.com/contenido/ficha/the-weather-song/477 If you choose the website option, hide the screen, and just listen to the song while students raise their weather words. Give out worksheet (WS-2), provided in the supplementary material section. Students listen to the song again and complete the words missing in it.</p>			
<p>ACTIVITY 3: (In groups of 4) "Travel Agency" Bring some travel agency brochures (it doesn't matter if they are not in English) Tell the students to imagine that they have won a travel prize and they can choose one of the five destinations on offer. Show the power point slides 1 to 7 (SM-UNIT1-lesson2-PPT) or the places cards, provided in the supplementary material section (SM-UNIT1lesson2- Cards) . Also you can use a world map to show where these places are found. Put students in groups of three and give out copies for the five destinations to each group. In order to make their choices, they need to find out about the weather and the activities in each destination. Children match the cards in groups (places, activities, climate, specific climate and clothes to wear). Check the answers showing power point slides 7 to 11. Ask questions about each place like:</p> <ul style="list-style-type: none"> - What do you think the weather is like in this place? - How do you know? <p>Ask students to choose two favourite destinations and think about the reasons for their choices.</p>			
<p>(This activity has been adapted from): http://www.metoffice.gov.uk/education/teachers/weather_data.html</p>			

ACTIVITY 4:

Give out WS-3, ask students to write down their chosen destination and be ready to agree with their partners using the following language support:

I'd like to go to _____	because	I like going	to the beach. to the forest.
I want to go to _____		I like	visiting places. Skiing.
		I can see	bears. camels. a desert.

ACTIVITY 5: (Plenary)

One student from each group tells the rest of the class their group's destination and gives reasons for their choice.

Ask individuals general question like:

How do you know what the weather will be like in this place?

RESOURCES:

- Song lyrics provided in Supplementary Material or internet access to <http://www.youtube.com/watch?v=uriObwm6S6Q>
- <http://www.multimedia-english.com/contenido/ficha/the-weather-song/477>
- Song worksheet. WS-2 (Students' worksheets section).
- Song (SM-UNIT1lesson2)
- Power point presentation(SM-ppt UNIT1lesson2).
- Language support worksheet WS-3 (Students' worksheets section).

WS = Students' Worksheets
SM = Supplementary Material Section

UNIT: 1	WEATHER PATTERNS	Sessions: 4	Time: 4h.
Lesson: 3	Climate zones around the Earth (Part 1)		1h.
<p>LEARNING TARGETS: In this unit students should understand that the Earth's climate zones are because of the different angles of the sun's rays when they hit the Earth. Students also learn about temperature and the location of the three main climate zones.</p>			
<p>ACTIVITY 1:(Plenary) "warm up" Write the letters to build up the words: EQUATOR - TROPIC OF CAPRICORN - TROPIC OF CANCER - ANTARCTIC CIRCLE - ARCTIC CIRCLE.. Give the letters to each group of 4 students to form a word . They put the letters together to form the word and stick them on a strip of paper. Ask students for the meaning of these words and why they are useful. Use a world globe to tell the students about the imaginary lines on earth. Locate them on the globe and ask students to label them with the word cards.</p>			
<p>ACTIVITY 2: (Plenary) Introduce the climate zones on Earth through the Power point presentation (Slide-4, SM-UNIT1 lesson3-PPT) provided in the Supplementary Material section. Tell students that the Earth is a sphere, so the Sun heats the tropics more than the poles. The Sun's rays hit the area around the Equator full on and make this the hot region of the Earth. Tell them also that near the poles the Sun's rays strike the Earth at a low angle. They spread over a wider area, and warm it less. Encourage students to guess the answers given on the slides.</p>			
<p>ACTIVITY 3: Using worksheet WS-4 (provided in the student's worksheets section) check individual students' understanding by observing students' work. Give them a few minutes to complete the boxes in each zone. Then ask questions e.g. Where are the coldest places in the world? Where are the hottest places? Which do you prefer? Why?</p>			
<p>ACTIVITY 4: "How climate zones can be shown on a map" Give out the map WS-5 (provided in the Students' worksheet section) and ensure that the students understand the map. Begin by locating: Spain, a continent and a sea. Then describe the different climates zones. Ask students to locate the Equator and write down the names of the tropics. Either write on the board two tables like the ones shown below and students copy onto a piece of paper or give out a photocopy.</p>			

Climate zone	My Countries		
Hot			
warm			
cold			

Language support:

- What is your country in the hot zone?
- What is your country in the warm zone?
- What is your country in the cold zone?

Climate zone	My partner's Countries		
Hot			
warm			
cold			

Using an atlas to help them, students write down, the name of three countries in each zone. Then they ask to a partner for their choice and write them on the partner's table. Finish the lesson with the "DO YOU KNOW" in the SM-UNIT1 lesson3-PPT (slides 2 and 3). Ask students the questions and wait for the answer.

RESOURCES:

- Letters cards
- Earth globe
- Some Atlas
- Power Point (SM-UNIT1lesson3)
- Worksheet WS-4
- Worksheet WS-5

WS = Students' Worksheets
SM = Supplementary Material Section

UNIT: 1	WEATHER PATTERNS	Sessions: 4	Time:4h.
Lesson: 4	Climate zones around the Earth (Part 2)		1h.

LEARNING TARGETS

In this unit students should understand the relationship between temperature and climate and learn about the Earth's climate zones according to temperature. They will also learn that long-term weather patterns make a climate and there are different climates around the world.

ACTIVITY 1:(Plenary) "warm up" Review key climate words learnt in lesson 3

Write half of the climate words names on two cards with the climate key provided on the worksheet WS-6.

e.g.

Po.....

.....lar

Des...

.....sert.

 and so on...

Give out the cards at random and students match them. Ask them what they think the words and the colors are related to.

Ask students to stick on the board like a key code.

ACTIVITY 2: " A climate map "

Tell the students that the words shown on the board are names of different world climates and the colors are the key to read the climate maps. Use slideshow (UNIT1lesson4-PPT) or make a coloured photocopy for each group of four (SM-UNIT1lesson4-Map) to help students to understand the task and colour the key in their climate map.

Give out worksheet WS-6 and ask them to complete their work individually.

When the students have finished ask them to check their work in pairs by asking one at a time:

- **What colour is for Polar /Warm temperate/ climate?**
- **It is grey...**

Write on the board:

What climate type is there in India?

In India there is a _____climate

In pairs, students ask each other looking at the slide or map provided.

ACTIVITY 3: (Individual) "Word relationship"

As an evaluation activity, give out worksheet WS-7. Ensure students know the meaning of the words in the box. Tell them to write these words in the right space. Differentiate by writing on the less-able students' worksheet one or two climate types in the corresponding place.

ACTIVITY 4: (Individual) "self evaluation"

Tell students that they have finished working on Unit 1 and you want to know how confident they are about the things they have learned in this Unit.

Hand out the self-evaluation sheet (WS- 8) and explain that this is a graph like they did in the previous lessons but now they will complete it with their own answers. Read the sentences in the axis line aloud and ask individuals how confident they feel talking about these matters.

It could be good to collect the sheets and compare with your opinions about the same items. Teacher's observation sheet in the Supplementary Material Section (Assessment)

RESOURCES:

- Letters cards
- Power Point (SM-UNIT1lesson4)
- Climate map (SM-UNIT1lesson4Act.2)
- Worksheet (WS-6)
- Worksheet (WS-7)
- Worksheet (WS-8)

WS = Students' Worksheets Section
SM = Supplementary Material Section

UNIT: 2	CLIMATE & LIFE AROUND THE WORLD	Sessions: 6	Time:6h.
Lesson: 1	Weather patterns; Polar, Temperate and Tropical (Part 1)		1h.

LEARNING TARGETS:

These series of lessons are designed to describe different patterns of weather. Students should learn about the main climate features in each climate zone.

ACTIVITY 1:(Plenary) "warm up"

Write down the headings: POLAR - TROPICAL - TEMPERATE. Show students three pictures of landscapes from the Polar zone, the Temperate zone and the Tropical zone (SM-UNIT2lesson1-Images), provided in the Supplementary material section. Put the pictures on the board next to the headings and explain that these pictures are places from those climate zones. Encourage the students to choose one of their favourite places and close their eyes. Tell them that you want them to " imagine that they are in that place". Ask questions like:

- How do you feel?
- Where are you?
- What are you doing?
- Are you cold/warm/hot?
- Who are you with?
- What are you wearing?

Give students a few seconds and when finished ask individual students questions like:

<i>Student's name</i>	where were you? were you cold ? who were you with? what were you doing?
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ACTIVITY 2: (Plenary and pairs)

Tell students that today they will learn more about the weather patterns in the three main climatic zones.

Write the table as below on the board or on backing paper .

Hand out the sentences provided in the supplementary material section (SM-UNIT2lesson1-Sentences). Give one to every two students, they read in order from number 1 to number 13 and place them in the corresponding zone.

Polar	Temperate	Tropical

ACTIVITY 3:

Cut in two the strip sentences provided in the Supplementary material section (SM-UNIT2lesson1- Sentences) . Give out two sentences to each pair of students. Half the class will have from number 1 to number 6 and the other half of class from 7 to 12. Students match the halves to build up a sentence and put them in order. Remind students that we use a capital letter at the beginning of a sentence and full stop at the end. When students have finished, read the sentences aloud in order from 1 to 12. Collect the strips of paper and hand out the worksheet WS -9. Ask students to complete the text individually.

Differentiate by writing a letter in each missing word and a number in its corresponding gap in the text. Ask less-able students to write the words matching the numbers.

ACTIVITY 4: "Average solving"

Tell students that it is time to change subject and a seal needs their help. Show them power point slides 1 to 7 (SM-UNIT2lesson1-PPT) provided in the Supplementary material section. Read and ask questions for understanding. Give out a separate piece of paper and encourage students to solve the problem using different strategies. Accept all the reasonable solutions and then show slide 8. (On Sunday the seal can eat eight pieces of fish because the average amount of fish she has eaten so far is 4'5 pieces a day. But you can accept that the seal can eat 5 pieces of fish because this is the average amount of fish a day she can eat).

RESOURCES:

- Sentences sheet (SM-UNIT2lesson1)
- Matching sentences (SM-UNIT2lesson1)
- Worksheet (WS- 9)
- Power Point (SM-UNIT2lesson1)

WS = Students' Worksheets Section
SM = Supplementary Material Section

UNIT: 2	CLIMATE & LIFE AROUND THE WORLD	Sessions: 6	Time:6h.
Lesson: 2	Weather patterns; world weather reports (Part 2)		1h.

LEARNING TARGETS:

In this lesson, students enlarge their knowledge about weather patterns by searching for information on the Internet and comparing what they find. They also learn to make and to interpret a climate graph.

ACTIVITY 1: "Searching for information"

Explain to students that they are going to compare temperature patterns in the world climate zones. Tell them they will do this by searching for internet information and reporting it to the class.

Write on the board the countries and the corresponding cities.

Egypt	Spain	Sweden
Asswan	Barcelona	Stockholm

Divide the class into three groups. Tell them that each group can choose a country but ensure that the three countries and cities are taken. Give out the database worksheet WS - 10 provided in the worksheet section and explain to the students the steps to follow during their search. In exercise number 6 they only complete the first chart.

<http://worldweather.wmo.int/> *** (If there is any problem with the access to Internet, give a copy per group of the "COMPARING TEMPERATURE" cards (SM-UNIT2lesson2-Data supplied) , avoid step 5 in the worksheet.

When students have finished collecting the data, write on the board:

- What was the temperature in _____ in January/February etc...
- It was _____ degrees.

Put students in threes, one from each different climate zone, and encourage them to ask each other and complete their charts with the information found. Check individual students for understanding.

- What's your city ?
- Which climate zone is it in?
- What's the maximum temperature for today? What's the minimum?

ACTIVITY 2: "Making a temperature graph"

Tell students how to make a graph to compare the three cities' temperatures.

Give out worksheet (WS -11A), differentiate by encouraging less-able students to add only Barcelona data on worksheet (WS - 11B). Give some time to finish the graph.

ACTIVITY 3: "Comparing temperatures in different world climate zones"

Show students Power Point (SM-UNIT2lesson2-Graph) provided in the Supplementary material section.

Ask students to check their work and consolidate their learning by asking:

- What was the temperature in (City) in (Month) ?
- What was the difference between (City) and (City) ?
- What was the coldest city in (Month) ?
- What was the hottest city in (Month) ?

RESOURCES:

- <http://worldweather.wmo.int/> or (SM-UNIT2lesson2Act.1)
- Worksheet (WS-10)
- Worksheet (WS-11A and 11B if necessary)
- Power Point (SM-UNIT2lesson2)

WS = Students' Worksheets Section
SM = Supplementary Material Section

UNIT: 2	CLIMATE & LIFE AROUND THE WORLD	Sessions: 6	Time:6h.
Lesson: 3	Main features of the World Climates		1h.

LEARNING TARGETS:

In this lesson students should learn to identify world climates, to analyze how climate affects landscapes and to recognize the relationship between vegetation and climate.

(Prepare as many cards as students in your class, supplied in the Supplementary material section).

ACTIVITY 1:(Plenary) "warm up"

Show the three different landscapes provided in the Supplementary material (SM-UNIT2lesson1-Images) or whatever landscape posters you have with views from different and contrasting climate conditions. Encourage them to answer your questions:

- **What differences can you see among these landscapes?**
- **Why do you think these landscapes are so different?**
- **Can we see a similar landscape in our area?**
- ***In which of them would you like to live? Why?***

Give out one card per student: (SM-UNIT2lesson3cards)

DESERT	Where are you from? I am from Aswan	POLAR	Where are you from? I am from Churchill	WARM TEMPERATE	Where are you from? I am from Barcelona
COOL TEMPERATE	Where are you from? I am from Edinburgh	TROPICAL	Where are you from? I am from Manaus	MOUNTAIN	Where are you from? I am from Innsbruck

Ensure there are six groups, as many as there are different types of climate. There should be four students in each group.

Tell students to pretend they are from the place given on the card. Ask them to stand up and find those classmates who are from the same place by asking the question on the card. When they have found them ask students to keep the card and sit together.

ACTIVITY 2: (groups of four) "wall dictation"

You have already prepared three big pieces of backing paper and written the headings on each piece of paper: COLD - TEMPERATE - HOT and put them on different walls in your class. Also you have stuck the texts for the two types of climate on each zone (SM-UNIT2lesson3-climates) supplied in the supplementary material section.

Encourage students to guess which climate zone and which climate type their place card from the previous activity belongs to.

Call out a type of climate and ask them to stand up and go to the corresponding display. Give each group the name of their corresponding climate, e.g. POLARS those who have the polar climate Churchill card, WARMS those with the Barcelona card, COOLS with the London card, DESERTS with the Aswan card, MOUNTAINS with the Innsbruck

card and TROPICALS those who have the Manaus card. Ask the groups to sit together. Give out WS-12 (front and back) to the corresponding group.

<p>COLD</p> <p>Polar</p> <div style="border: 1px solid black; width: 60px; height: 40px; margin: 5px auto; text-align: center;"> </div> <p>Mountain</p> <div style="border: 1px solid black; width: 60px; height: 40px; margin: 5px auto; text-align: center;"> </div>	<p>TEMPERATE</p> <p>Warm</p> <div style="border: 1px solid black; width: 60px; height: 40px; margin: 5px auto; text-align: center;"> </div> <p>Cool</p> <div style="border: 1px solid black; width: 60px; height: 40px; margin: 5px auto; text-align: center;"> </div>	<p>HOT</p> <p>Tropical</p> <div style="border: 1px solid black; width: 60px; height: 40px; margin: 5px auto; text-align: center;"> </div> <p>Desert</p> <div style="border: 1px solid black; width: 60px; height: 40px; margin: 5px auto; text-align: center;"> </div>
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Give each member of the group a number from 1 to 4. Tell them that student number 1 should go to the wall, read a sentence and report it to their group. Each one in the group copies the sentence or part of the sentence onto their worksheet. Now it is the turn of student number 2 and so on.

When the groups finish the dictation text they complete the chart below by transferring the information in the text.

ACTIVITY 3: "Information reporter"

Students are in the same group as for the previous activity with the information from the text on worksheets 12A,B,C,D,E and F. Tell them that one from each group will be a reporter, encourage the groups to choose their own representative. One reporter at a time answer the classmates' questions and the rest of them write the climate on the top of the box on the back of the sheet and complete the information gaps for each type of climate.

Write on the board the following questions:

- Where are you from?
- What type of climate is there in.....?
- What is the average temperature/precipitation/sunshine?
- What are the winds like?

ACTIVITY 4: "Travelling to....." ICT focus

The activities related to weather on this bbc website give a good opportunity to review the content taught in this lesson,

<http://www.bbc.co.uk/schools/whatisweather/>

RESOURCES: - Where are you from cards.

- Three large pieces of backing paper.
- Climate facts dictation (SM-UNIT2lesson3)
- Worksheet (WS-12A,B,C,D,E and F, front and back)

<http://www.bbc.co.uk/schools/whatisweather/>

WS = Students' Worksheets Section
SM = Supplementary Material

UNIT: 2	CLIMATE & LIFE AROUND THE WORLD	Sessions: 6	Time:6h.
Lesson: 4	Effects of climate on landscape and people		1h.
<p>LEARNING TARGETS: By the end of this lesson it is expected that children will be able to explain physical and human characteristics of places, and their similarities and differences. Also explain patterns of physical and human features.</p>			
<p>ACTIVITY 1:(Plenary) Introduce the lesson by showing the Power Point (SM-UNIT2lesson4PPT) Ask your students to predict what they will see, encourage students to talk about the main features of the different climates already learnt in previous lessons. Use them for discussion about weather, landscapes... Any information will be used in activity 2. T - What climate type do you think there is in this place? S - Mn, Polar, tropical... (show the information and continue asking specific questions) T- In which continents do you think it is found? S- Mmm, I think it is in America..... And so on.....</p>			
<p>ACTIVITY 2: (groups of four) Ask students to go into the same group they worked with in the last class (Polars, Warms, Cools, Deserts, Tropicals and Mountains). Name one secretary in each group and remind them the city which they belonged to. Explain to them that at the end of the lesson they will be experts on their countries and then will know more about the other groups' countries. They need to know more things about the area where they are supposed to live because they will give the rest of the class a detailed report of their climate zone, so that their partners say whether or not they would like to visit the place. Provide each group with an Atlas. Give out WS-13 A,B,C,D,E,F to each corresponding group (supplied in students' worksheets section) Students locate their city on the map and, using the Atlas, they look for three countries with the same type of climate. They write down their names at the bottom of the page.</p>			

ACTIVITY 3: (in pairs and in fours)

Hand out a copy of the climate fact file (SM-UNIT2lesson4-facts) to each pair in the corresponding group. The student with the fact file sheet reads the information aloud up to the triangle sign ▲ and their partner makes notes in the corresponding boxes in the sheet (Rough Draft WS-14) They then swap roles and student B reads while student A makes notes (on the same sheet). The students should have one completed worksheet between them. They discuss together if they are happy with the information on it with the whole group and then each student copies their final agreed ideas onto a new worksheet each (WS-14) to refer to in the next part of the lesson.

Language support:

It	always usually occasionally never	snows. rains.
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It's	always usually occasionally never	hot. warm. cold.
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There's	always usually occasionally never	a	strong gentle	wind.
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ACTIVITY 4:

When students have written the information sheet, get the whole class's attention . Write on the board the questions in the box below.

Tell them that now they have to answer their classmates' questions. Ask one group to sit in front of the class with their papers, the rest of the class ask the questions in the box below.

- It is cold/hot there?
- What is the average temperature?
- Does it snow/rain there?
- How many seasons are there?
- Where is this climate found?
- What is the vegetation like there?
- Are there a lot of people or a few of them?

RESOURCES:

- Some Atlases or world maps.
- Power point(SM-UNIT2lesson4)
- Worksheet WS-13 (A,B,C,D,E,F)
- Worksheet WS -14 and rough draft.

WS = Students' Worksheets Section
SM = Supplementary Material Section

EXTRA ACTIVITY: "Let's make a book about the world's climates"

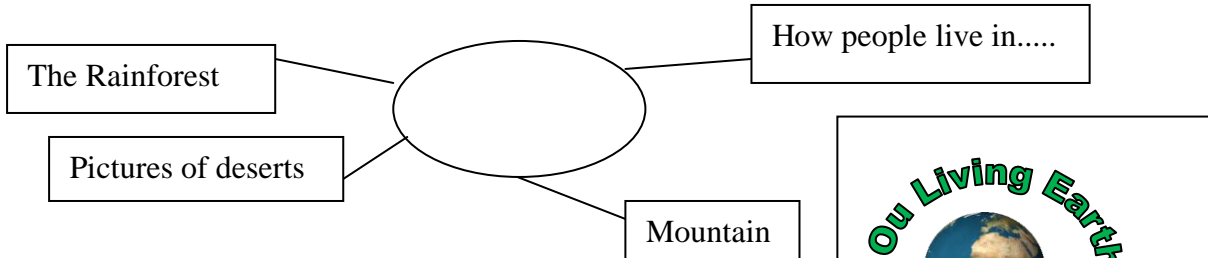
(This activity could be done as an extra activity for homework and during the next two lessons)

Tell students that they will make one book about the world and its climates. Each climate group will make a chapter. The class decides who makes the front and back cover. Each group presents a front and back cover and they choose the best.

Motivate students by asking them to imagine a new book about the world's climate.

- **What do they think is in it?**
- **What pictures does it have?**
- **What does it tell them about the world?**
- **How are the chapters organized?**

Brainstorm, write their ideas on the board and suggest your ideas to them.



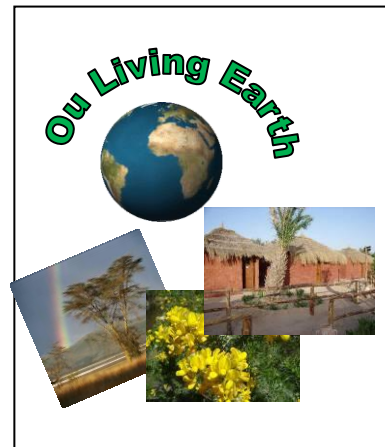
Ideas for the front and back cover:

OUR LIVING EARTH

This new book is about the world's climates today. It has over ___ beautiful pictures from over the world and has important information about many countries.

The book has six chapters:

- Tropical climates- read about rainforests in Brazil. Learn about people who live there.
- Polar climates. Learn about the way they live there.
- Montain....



A new book about the climate.

- Exciting and beautiful.
- Lots of interesting information.
- Fantastic pictures.
- Tells you about....

Give them a model as a guide and to make sizes of pictures etc... clear. There is an example in the Supplementary material section (SM-UNIT2lesson4book)

UNIT: 2	CLIMATE & LIFE AROUND THE WORLD	Sessions: 6	Time:6h.
Lesson: 5	Extreme climate regions: Polar and Desert regions (Part 1)		1h.

LEARNING TARGETS:

In these two lessons students compare the lifestyle in different regions, looking at how different climates affect living things and life in general.. They also should understand how climate influences human activity and culture.

ACTIVITY 1:(Plenary and threes) "warm up"

Use the set of cards (SM-UNIT2lesson5-Cards) from the Supplementary material section: There are two different sizes. You can use either the little ones with the template to make the classification easier or the big ones without template. Differentiate less able students using the template. Print the pictures and laminate them.

Write on the board the following language support.

I think this landscape goes with this	food people house	because it is usually	cold hot warm	there.
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Give each three students a set of landscape, food, people and house pictures. Ask students to look at the pictures of different places and match them to the traditional houses, food and clothes.

Encourage them to give reasons and to tell the class their ideas by asking them questions like: In each climate;

- Why do you think the houses are like that?
- Why do they eat that food?
- Why do they wear those clothes?

Show the real matching cards with the slide of Power Point in (SM-UNIT2lesson5cards)

ACTIVITY 2: (Plenary and individual)

Explain to students that today they will learn more things about two different climate regions: Polar and Desert.

Show them the first slide of the power point presentation (SM-UNIT2lesson5-PPT) in the supplementary material section. Ask students questions like:

- What can you see in the picture?
- What is the weather like there?
- Are there any animals or plants?

Encourage each pair of students to discuss the picture and ask them to come up with a definition of a desert. They should agree on a basic definition like: " **A desert is a hot place**".

Continue with the content power point presentation (slides 1 to 13) Stop at each slide and before showing content, ask the question and encourage students to look for an answer.

Pay attention to the end warning, slide 12 "Deserts are getting bigger" and discuss it with the whole class.

Stop power point and give out worksheet WS-15. Students make their choices on their own. Observe individual understanding for evaluation.

ACTIVITY 3: (plenary)

Continue the polar regions power point presentation, asking students in the same way as in the previous activity for the desert regions. Stop and ask them to come up with definitions if possible.

Discuss the end warning on polar regions, any conclusion is worthwhile to link to the last two lessons in Unit 3 about global warming.

ACTIVITY 4: (pairs)

Put students in pairs, one will be Student-A, the other Student-B. Give out the corresponding sheet (WS-16A and B). Tell them they have some missing information in their worksheet, they will complete the missing information by asking their partner.

RESOURCES:

- Power Point (UNIT2lesson5)
- Worksheet(WS-15)
- Worksheet (WS-16 (A & B))

WS = Students' Worksheets Section
SM = Supplementary Material Section

UNIT: 2	CLIMATE & LIFE AROUND THE WORLD	Sessions: 6	Time:6h.
Lesson: 6	Extreme climate regions: Polar and Desert regions (Part 2)		1h.
<p>LEARNING TARGETS: In these two lessons students will compare the lifestyles in different regions, looking at how different climates affect living things and life in general.. They also should understand how climate influences human activity and culture.</p>			
<p>ACTIVITY 1:(Plenary) "warm up" Give each student a matching card, word and definition, from the (SM-UNIT2lesson6-Cards) in the Supplementary material section. Ask students to find their matching partner. (Observe individual understanding for evaluation).</p>			
<p>ACTIVITY 2: (Groups of three) Put students into groups of three (A, B, and C) Give out the WS- 17 (A, B, C) Student A reads part 1, student B reads 2 and student C reads 3. They then decide which title to write for their text. Student A asks B</p> <ol style="list-style-type: none"> 1. What life can we see in the deserts? 2. How much of the world's land surface do the deserts cover? 3. What is happening to the deserts? <p>Student B asks C</p> <ol style="list-style-type: none"> 1- What has a strong effect on humans? 2- Where are the uninhabited territories? 3- What is happening to the semi-deserts? <p>Student C asks A</p> <ol style="list-style-type: none"> 1- What life can we see in Antarctica? 2- What is happening to the polar cap? 3- Why is this dangerous? <p>Hand out WS-18 and they read the three texts to check the answers.</p>			
<p>ACTIVITY 3: Let's see how much have we learnt" You can either give out a small white board to each student or a piece of paper. (If you choose a piece of paper, ask students to write down numbers from 1 to 25). Tell students they will do a quiz about what they have learnt in Unit 2. Use power point presentation climate quiz (SM-UNIT2lesson6-PPT). Show slide by slide and students write down their answers. Observe individual answers for evaluation.</p>			

UNIT: 3	CLIMATES & LIFE IN SPAIN	Sessions: 5	Time:5h.
Lesson: 1	Types of climate in Spain		1h.
<p>LEARNING TARGETS: This series of lessons is designed to help students to recognize the types of climates in Spain. Also to define flora within the climate regions and to realize the connections between them.</p>			
<p>ACTIVITY 1:(Plenary) "warm up" You will need a climate of Spain map poster. Put it on the wall and stick around the sentences provided in the Supplementary material section. Make a photocopy of the Spain climate puzzle and the climate key strips, cut it and laminate if possible. Do the same with the Spain climate map. You will find all of this material (SM-UNIT3lesson1-Puzzles&maps) in the Supplementary material section. Ask students to read the sentences on the wall and guess the answers. Give one piece of the puzzle and the climate key strips to each one or two students. Tell them this is a puzzle and ask them to stick the matching pieces together. Use the climate map template as a reference to help them to shape the climate map of Spain. Activate the students' attention by asking:</p> <ul style="list-style-type: none"> - Can you guess the topic of the lesson today? (write it on the board) - How many climates are there in Spain? - What are the climates' names? - What colours will we use for the key? 			
<p>ACTIVITY 2: (Individual) Give out the WS- 19 and ask students to colour the key and the different climate regions on the map of Spain. Using an Atlas write down the name of a city in each climate region.</p>			
<p>ACTIVITY 3: (in pairs) Write on the board: -What city is in (6, 8) ? -It is Put students in pairs and tell them that one of them will be student A and the other student B.Student A asks student B and student A completes their city, then it is student B's turn. Give them their corresponding worksheet (WS-20A and WS-20B) and tell them not to tell their partners.</p>			
<p>ACTIVITY 4: Give each student one information card (SM-UNIT3lesson1-Cards) from the Supplementary material section, they read aloud the climate information on it. First</p>			

read all "As" students and students "Bs" do it after. When they have finished ask those who has the city with the same type of climate to join together.

RESOURCES:

- **Climate map of Spain poster (No provided)**
- Wall questions. (SM-UNIT3lesson1)
- Spain climate map puzzle and key strips (SM-UNIT3lesson1)
- Spain map template (SM-UNIT3lesson1)
- Worksheet map (WS-19)
- Worksheet A and B (WS-20A and 20B)
- Cities information cards (SM-UNIT3lesson1)

WS = Students' Worksheets Section
SM = Supplementary Material Section

UNIT: 3	CLIMATES & LIFE IN SPAIN	Sessions: 5	Time:5h.
Lesson: 2	Comparing different climates.		1h.

LEARNING TARGETS:

In this lesson students will compare weather conditions in different cities located in different climate regions within Spain. They will make some temperature and rainfall graphs.

ACTIVITY 1:(Plenary) " Loop game "

Give each student a card from the loop cards game (SM-UNIT3lesson2Act1) provided in the Supplementary material section. Explain to them that in their cards they have an answer for the classmate who asks them and a question for them to ask.

Start and finish the loop with the coloured card.

BARCELONA It is 13°C What's the temperature in Madrid?
--

ACTIVITY 2: (group and individual)

Tell students they will compare the average temperature and rainfall in five different cities, each one located in one of the five different types of climates in Spain. They will collect the data from the internet; <http://www.worldweather.org/083/m083.htm> , then they will share the information with their classmates and finally, display it onto a graph.

Write on the board the cities; **Barcelona, Bilbao, Madrid, Almeria, Sevilla, Valladolid.** Put students in groups of four. Give out the worksheet (WS-21) and each group writes down the name of their city. Read the instructions out loud and check understanding. While searching, students complete WS-21. If there is any difficulty with decimal numbers, allow students to round numbers.

ACTIVITY 3: (Group, individual and pair)

Ask students questions about the average temperature on their charts:

- **What's the average temperature in January/February etc.. in?**
- **What's the average rainfall in January/February etc..... in?**

Give out the worksheet (WS- 22) and students make the average temperature and rainfall graph with their city information chart. Make sure they know how to make the graph. Then they write down which type of climate there is in their city.

When all the groups have finished, put students, in pairs each one with a different city graph . They compare the two cities. Write on the board some language support;

The average temperature in	Barcelona Bilbao Sevilla Almeria	is	higher lower	than in	Barcelona Bilbao Madrid Sevilla
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The average rainfall in		Madrid		less more		Almeria Valladolid	
Barcelona Bilbao Madrid Sevilla Almeria Valladolid	is	hotter colder wetter drier	than	Barcelona Bilbao Madrid Sevilla Almeria Valladolid	because it has a	Continental Mediterranean Oceanic Semi-arid	climate.

ACTIVITY 4: (pairs)

Ask some students to perform a TV forecast to describe the climate and the weather in their cities. Give them a sheet with the language support to do the performing. You may adapt from this example:

PERFORMING TEMPLATE

<ul style="list-style-type: none"> - Good morning! Weather news from (name of the city) - As you know, _____ has a _____ climate. 		
-We usually have	cold warm mild wet dry hot	weather.
<ul style="list-style-type: none"> - Today the weather is _____. - Tomorrow the weather will be _____. - So, enjoy doing what you want. - Have a nice day! Bye! 		

Students report the weather information from their city weather forecast.

RESOURCES:

- Loop game cards (SM-UNIT3lesson2)
- Work sheets (WS-21 and WS-22)
- Website : <http://www.worldweather.org/083/m083.htm>
- Performing language sheet

UNIT: 3	CLIMATES & LIFE IN SPAIN	Sessions: 5	Time: 5h.
Lesson: 3	Effects of climate on landscape in Spain		1h.
<p>INTRODUCTION: In this lesson students should identify each climate by its own common flora.</p>			
<p>ACTIVITY 1: Give to each 5 students a verse (SM-Unit3lesson3-Song) provided in the Supplementary material section. Ask them to read it and draw it on a sheet. When they have finished pick up one drawing of each group and put them on the board, write a letter below each picture (there must be 5 pictures). Ask students to write numbers from 1 to 5 on a separate piece of paper. Tell them you will read the text (if you could find the song it would be better to listen to the song) and they will match the letters of each drawing with the numbers on their sheet so, they have to write the letter with the corresponding number.</p>			
<p>ACTIVITY 2:(Plenary) Introduce the lesson showing the first slide of the power point presentation (MS-UNIT3lesson3-PPT) in the Supplementary material section. Ask the question hiding the answer and elicit students' guesses. Activate students' knowledge.</p>			
<p>ACTIVITY 3: (individual assessment) Give out worksheet WS-23 (students' worksheets section). Explain to them not to tell their partners. Read aloud and ensure students' understanding. Choose three pictures from the (PWP-UNIT3lesson3) including one of the semi-arid climate. Show the pictures for the first exercise, ask students to circle the answer and give reasons. Students make their choices individually.</p>			
<p>ACTIVITY 4: "Let's make a display" (Tell students the day before, so that they can search for extra information and bring their own pictures) Prepare the display board by covering it in black paper. Cut out a large paper circle and draw an outline map of Spain on it. Students colour the map or cover it with little balls of tissue paper to show the land and sea areas. Cut out smaller circles from card, one for each climate zone group. Put students in 5 groups, one for each type of climate. Explain to them they will work on one specific type of climate, tell them which one. Ask students to design a collage to show some of the characteristics of the different climates. Ideas could include temperature, vegetation etc.. Give the students a selection of collage materials and paints to create their picture. Label the areas of research and link them to the Spain map with arrows.</p>			

Spain Climates



RESOURCES:

- Sentences and song (SMUNIT3lesson3Act1).
- Power point (UNIT3lesson3).
- Worksheet (WS-23).
- Display board card.
- Black paper.
- Collage materials.
- Paints and brushes.

WS = Students' Worksheets Section
SM = Supplementary Material Section

UNIT: 3	CLIMATES & LIFE IN SPAIN	Sessions:5	Time: 5h.
Lesson: 4	Global Warming: Climate Change (Part 1)		1h.

LEARNING TARGETS:

In this lesson students should learn what global warming is. They will understand why the Earth's average temperature is rising and the consequences of it.

ACTIVITY 1:(Plenary) "warm up"

Write on the board the following heading "GLOBAL WARMING"

Remind students of the last class conclusions about the ice cap pole getting thinner and the Semi-desert areas becoming deserts.

Explain to students that today they will do an experiment about one of the consequences of global warming "the sea level rise".

ACTIVITY 2: (Plenary) "Warming Experiment"

EXPERIMENT GUIDE

MATERIAL NEEDED	PROCEDURE
<ul style="list-style-type: none"> - Three lumps of ice (the same volume). - Three measuring jugs (more than 1l.). - Three colanders. - Three thermometers. - A clock. - Some water. 	<ol style="list-style-type: none"> 1. Fill each jug with the same amount of water (one liter, if the jug is small, less water but don't fill to the top). 2. Put the colander on each jug. 3. Drop the ice into each colander. 4. Place the jugs: (A) outside (no sun), (B) in the room (far from the heater) (C) next to the heater. 5. Place the thermometer and write down the temperature in each place. Record on worksheet WS-17A- Back. 6. Record the level of the water in each jug and the time. The next observation will be in one hour's time. 7. Record the second observation. 8. Do the last (third) observation and record the levels and the time.



With this experiment you will see that the level of the water in the jug rises depending on the air temperature. This is because with higher temperature, ice melts quicker. This is quite obvious but it is worth using it to motivate students and make them curious about the subject.

Ask students to get into groups of four (suggest the last lesson groups: Polars, Warms, Cools, Deserts, Mountains and Tropicals) and name a representative.

Give out the warming experiment worksheet WS-24 (step 1, 2 and 3). Explain the procedure and focus on the first point which is the thing they will investigate . Write

on the board; **What are we investigating?** Accept students' suggestions and come up with the sentence:

"How different temperatures affect water levels as a result of melting ice".

Write the sentence on the board and students copy it onto their worksheet.

Present the equipment, show the items one by one. Start the procedure and ask for representatives to do the duties. (record the time, the water level and the temperature).

Talk about students' predictions and they write down on their worksheet.

ACTIVITY 3: "find out the procedure"

Ask students to tell you what the procedure was to prepare the experiment. Tell them that each group will find out one of the instructions by decoding a message and after that they will order them and write on their warming experiment observation sheet. Give out the WS- 26 (A,B,C,D,E,F) to each corresponding group. Students work in their group.

When all the groups have finished, the representative of each group stand in front of the class and they read the instructions. The whole class finds out what is first, second and so on... They write it on the board and everyone copies this onto their warming experiment sheet WS-24 (Step 1, instructions)

Tell them that the second observation will be in one hour time so representatives have to pay attention (the others can remind them too). The third and last observation will be in two hours (ask the classroom teacher) They have to collect and fill on the observation worksheet.

ACTIVITY 4: (plenary) "Sea water average temperature for the seals"

Write on the Board: AVERAGE TEMPERATURE, remind students about Seal's fish average in Unit 2 lesson 1. Tell them that the seal needs help again.

Review with some examples the concept of average learnt through the unit.

Show slides 1 and 2 of power point (SM-UNIT3lesson4-PPTAverage) and read the situation and the questions together. Ask students to solve the Seal's problem.

ACTIVITY 5:

Show students the first slide of power point "Do you know that....." (SM-Unit3lesson4PPT) supplied in the Supplementary material section. Talk about the topic and welcome students' knowledge about it.

Show the rest of the slides encouraging students to get involved in the topic.

RESOURCES:

To do the experiment:

- Three thermometers.
- Three measuring jugs.
- Three lumps of ice (the same volume).
- Some water.
- Worksheets WS-24 (front and back).
- Worksheet WS-25 and 26(A,B,C,D,E,F).

- Power point (UNIT3lesson4)
- Power point (UNIT3 lesson4Average)

WS = Students' Worksheets Section
SM = Supplementary Material Section

UNIT: 3	CLIMATES & LIFE IN SPAIN	Sessions:5	Time:5h.						
Lesson: 5	Global warming: How it affects Spain (Part 2)		1h.						
<p>LEARNING TARGETS: In this lesson students should learn to describe global warming. They will understand why the Earth's average temperature is higher and the consequences of it in Spain. Also they become aware of the things we can do in order to make a difference.</p>									
<p>ACTIVITY 1:(Plenary) "warm up" Write on eight pieces of paper the words for the heading: "OBSERVING ONE OF THE CONSEQUENCES OF GLOBAL WARMING" Put the words on the board. Put the words ONE, THE, GLOBAL, WARMING face down. Ask students to guess today's topic of the lesson.</p>									
<p>ACTIVITY 2: (Plenary and pairs) Ask students to take out the last class observation worksheets. Ask questions about step2 : What time was the first/second/last observation? How many degrees when the first/second/third.....? What was the level of the water when the firs/second.....? Elicit the students' recorded information. Ask them to read the questions on the worksheet. Check for understanding. Write on the board some language support to help students write down their conclusions:</p> <table border="1"> <tr> <td>The level of the water in</td> <td>jug A jug B jugC</td> <td>was</td> <td>higher lower</td> <td>than the level in</td> <td>jug A jug B jugC</td> </tr> </table>				The level of the water in	jug A jug B jugC	was	higher lower	than the level in	jug A jug B jugC
The level of the water in	jug A jug B jugC	was	higher lower	than the level in	jug A jug B jugC				
<p>ACTIVITY 3: (Individually) Give out worksheet WS-27. Explain to students there are some words with three different options. They read the text and circle the most appropriate word. When students finish, they read the text aloud.</p>									
<p>ACTIVITY 4: "Let's see how global warming affects Spain" Introduce the subject by showing power point (SM-UNIT-3lesson5-PPT). Explain to students the content and elicit students' knowledge about the topic. Put students in groups of three and give each student a letter (A, B and C). Tell them they will read some pieces of news about how global warming affects Spain. Give out worksheet (WS-28 A,B,C).Student A reads <u>text 1</u>, student B reads <u>text 2</u>, and student C reads <u>text3</u>, each one complete the questions on their worksheet and chooses an appropriate heading. Then they tell the others what the piece of news is about. Give out worksheet WS-29. Ask students to read the three pieces of news in their group. They choose an appropriate title for the three pieces of news and write it down</p>									

on the heading.

Ask some volunteers to perform a TV news programme. Some music to start performance, like in TV news, could help to motivate the activity.

RESOURCES:

- Worksheet WS-27
- Power Point(UNIT3lesson5)
- Worksheet WS-28(A,B and C)
- Worksheet WS-29

WS = Students' Worksheets Section
SM = Supplementary Material Section

EXTRA ACTIVITY:

In pairs from the investigation groups students go through the website page written below and write down 5 things they can do to help with the Global warming on a piece of paper. Tell them they have to share these with their partners in the next class. Allow them to go through the site on their own (they can play some games related to the topic).

If there is any problem with the access to internet or to this site, it could be good to finish the class by listening to a nice rap song about global warming. You can find this song on the website below.

<http://www.youtube.com/watch?v=08z-Hw7s54E> (SONG)

<http://passporttoknowledge.com/polar-palooza/whatyoucando/taacc/> (SONG KARAOKE)

<http://epa.gov/climatechange/kids/difference.html> (WE CAN MAKE A DIFFERENCE)

Finally students either can make some notices about the things we can do in our school to make a difference and put them on the school walls or they can make a Global warming display.

RESOURCES

Reference Books:

- **Cambridge English for Schools.**
Student's book two. Andrew Littlejohn, Diana Hicks.
- **Learning Targets. Geography. Key Stage 2. Scotland P4-P6**
Stephen Scoffham, Colin Bridge. Terry Jewson.
- **Essential. Geography and History 1**
Santillana. Richmond publishing
- **Essential Science 6. Science, Geography and History.**
Santillana. Richmond publishing
- **New Science 6. Science, Geography and History.**
Santillana. Richmond publishing
- **New Science 5. Teacher's book.**
Santillana. Richmond publishing
- **Living Geography.**
Explore the world's oceans, rivers, weather and maps through exiting activities and experiments. Two Can publishing
- **Weather patterns. Weather and climate.** Terry Jennings. Evans publishing
- **Polar regions.** Geography Fact Files. Paul Mason
- **Teaching other subjects Through English.** Sheelagh Deller and Christine Price. Oxford University Press
- **Geography on display.** Claire Tinker

Websites

Websites used:

- <http://www.iberianature.com/geography/spanish-climate/>
- <http://www.epa.gov/climatechange/kids/index.html>
- <http://www.britishcouncil.org/learnenglish-climate-change-home.htm/>
- <http://www.worldweather.org/>
- www.bbc.co.uk/weather/weatherwise/living/surroundings/houses.shtml
- www.bbc.co.uk/learningzone/clips
- http://www.metoffice.gov.uk/education/teachers/weather_data.html
- <http://www.eduplace.com/ss/maps/>
- <http://www.geography.learnontheinternet.co.uk/topics/desert.html>
- <http://www.factmonster.com/statemaps.html>
- http://images.google.es/advanced_image_search?hl=es
- <http://www.flickr.com/>
- <http://en.wikipedia.org>

Useful websites:

- library.thinkquest.org/CR0210360/rainforests.html
- www.keepbenderabeautiful.org/keeprainforests.html