

**THE SOLAR SYSTEM**  
**Teaching Notes**  
**UNIT 1**

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October-December 2009

TEACHING NOTES	THE SOLAR SYSTEM			
<b>UNIT1:</b> THE SOLAR SYSTEM	<b>SUBJECT:</b> SCIENCE	<b>LESSON 1:</b> INTRODUCTION TO THE SOLAR SYSTEM	<b>TIMING:</b> 60 MINUTES	<b>COURSE:</b> 6th GRADE
<p><b>OUTLINE</b></p> <p>To introduce the Solar System, suggest 4 starting activities. One of the main aims here is to activate students' previous knowledge, so start by encouraging them to think about and discover what the topic is about. Most of these activities are for small groups, the last one being a good opportunity to check what they learnt.</p>				
<p><b>ACTIVITY 1:</b> <i>Getting to know the topic</i></p> <p>Grouping: groups of four</p>				<p><b>RESOURCES NEEDED</b></p>
<p>Get the students into groups of four. Hand out <i>Worksheets 1A</i> and <i>1B</i>. Tell the students to use the scissors to cut out all the circles on the sheet as accurately as possible. Ask each group to put the circles in order of size. Then, ask them to write a number in each circle from the smallest to the biggest; you can put an example by saying "Circle number one will be the smallest. Circle number nine will be the biggest". To support your example, draw a small circle on the board with number one in it; next to it, draw a big circle with number nine in it. Tell them these two circles are the smallest and the biggest of the nine they have.</p>				<p>Worksheet 1A Worksheet 1B Scissors Board</p>
<p><b>ACTIVITY 2:</b> <i>Brainstorming</i></p> <p>Grouping: groups of four/plenary</p>				<p><b>RESOURCES NEEDED</b></p>
<p>Ask the students to think what these circles can represent and why you asked them to order the circles. Question them "Why nine circles?" and "Why different sizes?" Ask each group about their ideas and write them down on the board so the students have visual written support. Discuss the students' ideas leading them to what the new topic is about. If they don't know, tell them and then ask them to think about what they did.</p>				<p>Board</p>
<p><b>ACTIVITY 3:</b> <i>Which is which?</i></p> <p>Grouping: groups of four/plenary</p>				<p><b>RESOURCES NEEDED</b></p>
<p>Ask them "<i>Which of these circles do you think is the Sun? Why? How do you</i></p>				

<p><i>know? Can you write the name of any planet in the circles? Are you sure of any of them? Why?"</i> Wait for the students to give their opinions and suggestions. Then, hand out <i>Worksheet 2</i>. Tell them to keep working in groups: they read the sentences and decide which planet is bigger and smaller; ask the students to mark/write each of the circles with the corresponding real name of the planet or the Sun. Say, as an example, "Circle number 9, the biggest, is the Sun". Check students' work by asking them orally and write their answers on the board (remember: still ordered by size from the smallest to the biggest, but this is not the real order). Ask each group to compare the corrected answers with the ones they gave.</p> <p>Language support: comparative and superlative structures worked on (written on the board):</p> <p><i>...bigger than...   ...the biggest</i>  <i>...smaller than...   ...the smallest</i>  <i>...between...</i></p>	<p>Worksheet 2 Board</p>	
<p><b>KEY SOLUTIONS</b> (Ws 2)</p> <p>Planets and the Sun in order of size: 1-Mercury, 2-Mars, 3-Venus, 4-Earth, 5-Neptune, 6-Uranus, 7-Saturn, 8-Jupiter, 9-the Sun</p>		
<p><b>ACTIVITY 4:</b> <i>Ordering the planets and the Sun</i></p> <p>Grouping: individual/groups of four</p>	<p><b>AFL Activity (1)</b></p>	<p><b>RESOURCES NEEDED</b></p>
<p>Ask the students if they know the real order of the planets from the Sun onwards: "Are the planets in the correct order, from the smallest to the biggest? Is it like this in real life?" Wait for them to realise they are not, then tell them to guess the real order by doing <i>Worksheet 3</i>. Ask the students to compare their answers in groups of four. Now, tell them to put the circle planets and the Sun in the right order starting with the closest to the Sun. Offer students some language support by writing on the board adverbs of sequence and then, give examples: "The Sun goes <i>before...</i>", "The Earth goes <i>after...</i>", "Then, Venus goes <i>before...</i>"). Walk around the groups and assess the work done and correct if necessary. With the whole group, check the answers by using the adverbs of sequence. Finally, use <i>Power Point</i> (slide 2, <i>Support teaching resources 1</i>) to show the students a picture with the planets and the Sun in their real order. Ask them to suggest a title for the picture on the slide; then, show the title. Remind students to put worksheets/slips in</p>	<p>Worksheet 3 STR 1 (Power Point, slide 2) Projector Computer Board</p>	

<p>their portfolio.</p> <p>Adverbs of sequence to be used:</p> <p>...after...</p> <p>...before...</p> <p>...then...</p>	
<p><b>KEY SOLUTIONS</b> (Ws 3)</p> <p>Planets and the Sun in real order: The Sun, Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, Neptune</p>	

TEACHING NOTES		THE SOLAR SYSTEM		
<b>UNIT1:</b> THE SOLAR SYSTEM	<b>SUBJECT:</b> SCIENCE	<b>LESSON 2:</b> ONCE UPON A TIME IN THE UNIVERSE!	<b>TIMING:</b> 60 MINUTES	<b>COURSE:</b> 6th GRADE
<p><b>OUTLINE</b></p> <p>Read the story to the students and support it with two follow-up activities. End the lesson with a song to let the students develop their imagination. Again, most of the activities are to be done in small groups.</p>				
<p><b>ACTIVITY 1:</b> <i>Once upon a time in the Universe!</i></p> <p>Grouping: plenary</p>				<p><b>RESOURCES NEEDED</b></p>
<p>To start lesson 2 ask the students what they remember from the last spelling. Then ask them to say the names of the eight planets in order. After that, explain they are going to listen to a story. Try to create a good story atmosphere (lights off, silence, etc.). Ask if they can imagine what the story could be about. Then, read the story aloud (<i>Sheets 1A and 1B from Support teaching resources 1</i>). Notice the story is not just to be read and listened to! <i>Once upon a time in the Universe!</i> requires help from the students; it means that as the text is read aloud, some questions appear in the story [in brackets] so that the students suggest answers. It does not matter if these answers are true or not. It is simply for them to be both engaged with the topic and to increase their curiosity. Every time there is a question in brackets, pause and wait for the students to give answers and afterwards, continue with the</p>				<p>STR 1 (Sheets 1A and 1B)</p>

reading.	
<b>ACTIVITY 2: <i>Let's put things in order!</i></b> Grouping: individual	<b>RESOURCES NEEDED</b>
Cut and hand out a slip of paper from <i>Sheet 2 (Support teaching resources 1)</i> . Explain that every word or short text on their slips appears in the story. Let them know you are going to read the story again and any time they hear what is written on their slip, they stand up and put it in order in a line. In case any word or sentence is said more than once, the students do not move, just stay in the line. Now, read the story aloud. The students should be lined up in the same order their words appear in the story. Ask the students (one by one starting from first on the line) to say their word or sentence aloud. In case there is any student left, ask the others where they think this student should be placed.	STR 1 (Sheets 1A and 1B) STR 1 (Sheet 2)
<b>KEY SOLUTIONS (STR 1, sheet 2)</b> Words appearing in this order: <i>Sun, galaxies, Universe, big explosion, Big Bang, solar systems, group of stars, Milky Way, orbit, moons, asteroids, comets, huge balls of gas, Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, Neptune, expanding, spherical bodies, small rocky planets, gas giants.</i>	
<b>ACTIVITY 3: <i>Re-creating the story</i></b> Grouping: groups of four/plenary	<div style="border: 1px solid black; padding: 2px; display: inline-block; background-color: #f4a460;">AFL Activity (2)</div> <b>RESOURCES NEEDED</b>
Ask the students to get into groups of four. Hand out <i>Worksheet 4</i> and ask the students to re-order the story. There are a set of sentences from the story on slips of paper, but not in order. These sentences don't have the same words as those which appeared in the story, but they explain the same facts. Ask them to cut the slips out and place them on the table. Then, ask them to order them. Ask the students to stand up and go around other groups' tables to check their mates' work and compare with theirs. Correct the slips aloud together with the whole group.	Worksheet 4 Scissors
<b>KEY SOLUTIONS (Ws 4)</b> Slips in order of appearance in the story: <i>1-I, 2-D, 3-F, 4-A, 5-E, 6-C, 7-G, 8-H, 9-J, 10-K, 11-B</i>	
<b>ACTIVITY 4: <i>Think about it!</i></b> Grouping: individual/pair work	<b>RESOURCES NEEDED</b>

<p>Hand out <i>Worksheet 5</i>. Explain that they are going to listen to a piece of music related to space. Ask them to draw what the music suggests to them. The name of the piece is <i>Sprach Zarathustra</i>, by Richard Strauss, which was the opening soundtrack piece to the film <i>2001: A Space Odyssey</i>. Play the piece of music twice and give the students time to imagine and draw. Try to create a relaxing atmosphere. Ask the students to work in pairs to show their partner the work done. Ask them to describe what they drawn by using the expressions from the language support provided on the board. Remind students to put worksheets/slips in their portfolio.</p> <p>Sentences to be used by students when describing their picture (written on the board):</p> <p>"There is a..."</p> <p>"There are..."</p> <p>"We can see...and..."</p> <p>Language support also on the board: some vocabulary learnt previously, e.g. <i>planets, star, names of planets, the Sun, Universe, etc.</i></p>	<p>Worksheet 5</p> <p>"Sprach Zarathustra"</p> <p>song</p> <p>CD-player</p> <p>Colour pencils</p> <p>Board</p>
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<b>TEACHING NOTES</b>		<b>THE SOLAR SYSTEM</b>		
<b>UNIT1:</b> THE SOLAR SYSTEM	<b>SUBJECT:</b> SCIENCE	<b>LESSON 3:</b> LET'S DO DRAMA!	<b>TIMING:</b> 60 MINUTES	<b>COURSE:</b> 6th GRADE
<b>OUTLINE</b> To finish unit 1, proceed with a drama, follow-up and visual support activities. This activates key vocabulary and at the same time creates the conditions for students to practise their speaking skills.				
<b>ACTIVITY 1:</b> <i>What can you see?</i> Grouping: groups of four			<b>AFL Activity (3)</b>	<b>RESOURCES NEEDED</b>
To start lesson 3, put the students in groups of four. Hand out <i>Sheets 3A</i> and <i>3B</i> from <i>Support teaching resources 1</i> . There are several pictures on the sheet related to the topic. Ask the students to take a quick look at the photocopies and then to identify the pictures and connect them with the contents learnt. Remember to praise them. Support the activity by writing some questions students may ask on the board and also some possible answers. Do not write				

<p>a question per picture; leave at least two or three and ask the students to try to think of the questions for the pictures left. Walk around the groups and check the work done by students, helping if necessary.</p> <p>Questions suggested by the teacher (displayed on the board):</p> <p><i>"What can you see in the Universe?"</i></p> <p><i>"Which one of these pictures is the Milky Way?"</i></p> <p><i>"Which one is the Earth?"</i></p> <p><i>"Which one is the Sun?"</i></p> <p><i>"And the Earth?"</i></p> <p><i>"Which picture is the Universe?"</i> (Notice this is a trick question because all of the pictures on display are about the Universe).</p> <p>Sentences to be used by the students (also displayed on the board):</p> <p><i>"I think...this is..."</i></p> <p><i>"Maybe..."</i></p> <p><i>"It could be..."</i></p>	<p>STR 1 (Sheets 3A and 3B) Board</p>
<p><b>KEY SOLUTIONS</b> (STR 1, sheets 3A and 3B)</p> <p>Pictures: 1-the planets; 2-the Solar System; 3-the Sun; 4-the Milky Way; 5-stars; 6-the Earth; 7-the Big Bang; 8-galaxies; 9-galaxies; 10-the Moon; 11-asteroid; 12-Saturn</p>	
<p><b>ACTIVITY 2:</b> <i>Find your partner!</i></p> <p>Grouping: pair work/plenary</p>	<p><b>RESOURCES NEEDED</b></p>
<p>Cut and hand out a slip of paper from <i>Sheets 4A</i> and <i>4B</i> (<i>Support teaching resources 1</i>). Half of the slips are white (Sheet 4A) and half yellow (Sheet 4B). On every yellow slip there is some information related to information on the white slips. Tell the students to find a partner whose information corresponds with theirs. Ask them to stand up and start looking for their partner by asking and answering in English. Ask the students to stay in pairs; check the information from the yellow and white papers to be true (correct it aloud). If any pair is wrong, ask them to listen to the other pairs and try again (help if necessary).</p> <p>Suggested sentences proposed for the students to use when trying to find their partner (on the board):</p> <p><i>"What have you got on your paper?"</i></p> <p><i>"Do you have...?"</i></p> <p><i>"My word is..."</i></p>	<p>STR 1 (Sheets 4A and 4B) Board</p>

<i>"I've got...on my paper."</i>		
<b>KEY SOLUTIONS</b> (STR 1, sheets 4A and 4B) White/Yellow papers connections: <i>1-I, 2-N, 3-G, 4-F, 5-B, 6-K, 7-D, 8-C, 9-E, 10-J, 11-H, 12-A, 13-M, 14-L</i>		
<b>ACTIVITY 3:</b> <i>Do you remember...?</i> Grouping: pair work	<div style="border: 1px solid black; padding: 2px; display: inline-block;"> <b>AFL Activity (4)</b> </div>	<b>RESOURCES NEEDED</b>
Put the students in pairs and explain that the following is an oral activity as a revision. Hand out <i>Worksheets 6A</i> and <i>6B</i> and ask the students to take a quick look. Explain to them there are <i>Student A</i> and <i>Student B</i> questions on <i>Worksheet 6</i> with some language support provided. <i>Student A</i> and <i>Student B</i> questions are also provided with the answers in order for the students to check their partners' ones. Ask the students to start the activity; tell them to invent a question for their partner in the blank provided. Proceed with a whole group correction by asking them in turns.		Worksheet 6A Worksheet 6B
<b>KEY SOLUTIONS</b> (Ws 6A and Ws 6B) <i>Student A:</i> 1-Big Bang; 2-the Sun; 3-Mercury; 4-one; 5-galaxies; 6-Inner planets: small, rocky/Outer planets: big, gaseous; 7-open <i>Student B:</i> 1-the Milky Way; 2-Jupiter; 3-the Earth; 4-about 100 billion galaxies; 5-nothing/no matter/no time/no space; 6-the Big Bang explosion; 7-open		
<b>ACTIVITY 4:</b> <i>We are the Universe!</i> Grouping: plenary		<b>RESOURCES NEEDED</b>
Explain that the students are going to act out a short version of the story ( <i>Sheets 5A</i> and <i>5B</i> from <i>Support teaching resources 1</i> ) while listening to the song they heard in lesson 2, activity 4. Prepare the previous stage of the drama with the students very carefully. Each student or group of students is an object from the space: the Sun, the Earth, galaxies, Solar System, etc. Place the students altogether in the middle of the classroom. They keep quiet and do nothing. Start reading the story aloud very slowly. Emphasize the words in bold, because that means students respond to something (move, expand, join together), written in the story. Remind students to put worksheets/slips in their portfolio.		STR 1 (Sheets 5A and 5B) <i>"Sprach Zarathustra"</i> song CD-player