

Goal-directed Instructional Design Plan

Science: Understanding the Effects of Earth's Place in Space

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1. **A problem or a need** – The Earth needs to be in its exact position in the Solar System. Life on Earth relies on this position. If it were in a different position in the Solar System, life would not exist the same way.
2. **A real-world performance** – Students will be able to explain major natural happenings on Earth after learning about the position of Earth in the Solar System and what it means to life on Earth.
3. **An instructional objective** – the objectives are based on the final outcome, activity or test. These objectives will each be different for the four types of knowledge; *performing skills, recalling facts, identifying examples of concepts, and applying principles.*
 - a. *Students will be able to identify the position of Earth in relation to the Sun and the other planets in the Solar System.*
 - b. *Students will be able to identify natural happenings such as seasons and time zones due to the position of Earth.*
4. **A set of essential content** – the basic ideas and skills that will allow the learner to complete the task or understand the content.

A skill that will be evaluated is the ability to identify the position of Earth in the Solar System along with position of the other planets in relationship to the Sun. Another skill that will be evaluated is the ability to explain the relationship between the position of the Earth and seasons, as well as time zones.
5. **An evaluation consisting of a test or observation** – an assessment, observation or product showing that the objectives can be accomplished in the real-world setting. Students will show their understanding of the above skills by correctly labeling a blank Solar System diagram. They will also show their understanding of the relationship between time zones and seasons with the Earth's position in a manner that they chose. This manner must be approved by the teacher and the presentation must meet expectations set in the assignment rubric. Students will be given a list of acceptable presentation options but may choose an acceptable alternative presentation option.
6. **A method to help participants learn** – the method to deliver the content; a lesson. Teacher will read aloud, *My Place in Space* by Robin and Gally Hirst. Students will watch three BrainPOP videos; *Solar System, Seasons, and Time Zone*. Students will then have access to watch the videos again on their own, read from a variety of nonfiction books relating to the topics, and research other websites using student-friendly aggregators such as google-kids.com.

• **Motivation:** 

- Learners will have a broader understanding of their place in space and why it matters.
- Pleasant consequences: The learner will feel confidence in explaining where Earth is located and what that matters to their own lives.
- Novelty – Start with the book, *My Place in Space* by Robin and Sally Hirst, summary: Henry Wilson and his sister Rosie know exactly where they live - and not just the street, the town and the country. They know their place in space. With fabulously detailed illustrations by bestselling illustrator Roland Harvey and Joe Levine, this book will enthral children and awaken their curiosity about the Universe.

• **Socialization** - a strong motivator for student learning

Students will have the option of working with others in creating their presentation  they will be encouraged to share their ideas, give and receive feedback throughout the creative process. They will also share their presentations with their peers. As a class we will decide the setting of the presentation. It may be that each student has the opportunity to present a small audience of their peers. It may be a museum setting where students will be set up around the classroom and they take turns being audience members with each other, or it may be that each student presents to the whole class one at a time.

• **Audience** – For what audience are you designing this lesson? Consider the following:

- Age: Grade 3, ages 8-9
- Skill level: ability to read nonfiction books, find and watch videos online within a video bank set by the teacher.
- Prerequisite knowledge (including technology background), ability to create a Word document, PowerPoint presentation, safely use the Internet, and/or ability to use BrainPOP.com.

• **Technology Needs** – the computers, software, programs (such as Angel or other CMS's) printers, equipment, Internet access, time in the computer lab will be needed to successfully complete your technology-rich lesson.

Computers with access to the Internet and include programs such as Microsoft Office.