

EDUC 4705 EA
Childhood Education: Kindergarten Focus
Lotje Hives
Integrated Unit Assignment #3

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Unit: SPACE



Our Big Idea

- Discovery: Children are curious and connect prior knowledge to understand the world around them



Students' Interest

- Students have been interested in things that fly
- Teachers have observed students building rocket ships with Lego
- Students have been interested in the stars
- Students have asked questions about the sun and moon



Overall Expectations

Personal/ Social

2. demonstrate independence, self-regulation, and a willingness to take responsibility in learning and other activities;

Language

1. communicate by talking and by listening and speaking to others for a variety of purposes and in a variety of contexts;

3. use reading strategies that are appropriate for beginning readers in order to make sense of a variety of written materials;

4. communicate in writing, using strategies that are appropriate for beginners;

Mathematics

G3: describe, sort, classify, build, and compare two-dimensional shapes and three-dimensional figures, and describe the location and movement of objects through investigation

Overall Expectations Continued

Science

2. conduct simple investigations through free exploration, focused exploration, and guided activity, using inquiry skills (questioning, planning, predicting, observing, communicating);

Physical Education

2. participate willingly in a variety of activities that require the use of both large and small muscles;

Drama

D1. demonstrate an awareness of themselves as dramatic artists and dancers through engaging in activities in drama and dance;

Music

M3: use problem-solving strategies when experimenting with the skills, materials, processes, and techniques used in music both individually and with others

Visual Arts

V2. demonstrate basic knowledge and skills gained through exposure to visual arts and activities in visual arts;

Personal/ Social and Emotional

Specific Expectations:

- o **1.2** demonstrate the ability to take turns in activities and discussions (e.g., *engage in play activities with others, listen to peers and adults*)
- o **2.5** interact cooperatively with others in classroom events and activities (e.g., *offer and accept help in group situations, engage in small- and large-group games and activities, participate in democratic decision making*)

Learning Experiences- Personal Social

Whole Group

- Group space games
- Taking turns acting-out space poems

Small Group

- Students can practice taking turns with different roles in the space station
- Students will work in small groups and be asked to build a rocket using a variety of building materials
- Problem solving any conflicts between peers at centers



Materials for Personal/Social



- o New materials to be added to dramatic center including a picture of a control panel, joystick, headset, helmets
- o Space poem "4 little Stars"
- o 3 Dimensional shapes in the building center to build rockets as a team

Language- Oral

Specific Expectations

- o ORAL 1.2 listen and respond to others for a variety of purposes (e.g., to exchange ideas, express feelings, offer opinions) and in a variety of contexts (e.g., after read-a-louds and shared reading or writing activities; while solving a class math problem; in imaginary or exploratory play; at the learning centres; while engaged in games an outdoor play; while making scientific observations of creatures outdoors)

Learning Experiences – Oral Language

Whole Group

- End of the day sharing circle. Asking the students a question where they have the opportunity to share. Examples “What do you know about space?” “Where would you go in space and why?” “What would you bring with you in your rocket?”
- After a read-a-loud of a fictional book about outer space like “Tea Time in Space” have students share ideas and opinions
- Asking students what questions they have about space
- Presentations on their own paper mache planets



Small Group

- Discussing what materials and resources are needed to change the dramatic center into a space station
- Students asking other students questions they have about space
- Discussing predictions and outcomes of light camera science experiment
- Communicating how we are going to build a 3 dimensional rocket for the classroom
- Build a vocabulary of space related words (universe, galaxy, constellations etc.)



Language- Reading

Specific Expectations

- **READING 2.3** demonstrate an awareness of basic book conventions and concepts of print when a text is read aloud or when they are beginning to read print (e.g., *start at the beginning of the book; recognize that print uses letters, words, spaces between words, and sentences; understand that printed materials contain messages*)

Learning Experiences – Reading

Whole Group

- Shared Reading- non-fiction texts on space and observing the different text features
- Have students retell the events of a shared reading
- Having students point to words during a shared reading

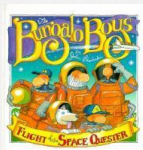
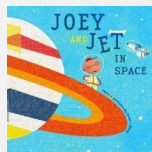


Small Group

- Have students look at books of interest (planets and stars) and have students point to where the text starts, read parts of the text and discuss how print carries and meaning
- Have students practice phonetic skills by sounding out simple space words



Reading Materials



Language- Writing

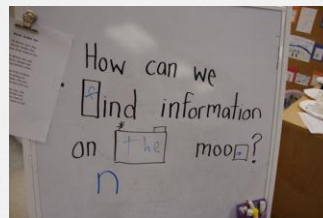
Specific Expectations

- **WRITING 4.3** write simple messages (e.g., a grocery list on unlined paper, a greeting card made on a computer; labels for a block or sand construction), using a combination of pictures, symbols, knowledge of the correspondence between letters and sounds (phonics), and familiar words

Learning Experiences- Writing

Whole Group

- Students help to solve morning messages about space
- Practice sounding out words and printing the corresponding letters



Small Group

- Students write questions they have about space
- Students write one fact they have learned about space
- Students write flight plans in the space station
- Students label drawings they have made at the creative table
- Students will write facts about their own paper mache plants
- Students will design and label their own constellations



Writing Materials

Writer's workshop



Writing template

Writing materials such as clipboards, pencils, and markers will be included at the following centers to extend student's work:

Building- to label space stations or rockets built

Dramatic- to write flight plans

Sensory Table- to record senses of moon dust

Creative- To label drawings or paintings

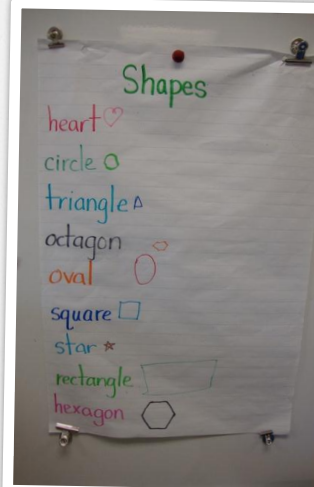
Mathematics

- **G3.1** explore, sort, and compare traditional and non-traditional two-dimensional shapes and three-dimensional figures (e.g., *compare equilateral triangles with triangles that are not equilateral; sort different sizes of boxes, attribute blocks, pattern blocks, a variety of triangles, shapes with three curved sides, objects that create an open shape with three lines*)
- **G3.2** identify and describe, using common geometric terms, two dimensional shapes (e.g., *triangle*) and three-dimensional figures (e.g., *cone*) through investigation with concrete materials
- **G3.4** build three-dimensional structures using a variety of materials and begin to recognize the three-dimensional figures their structure contains

Learning Experiences-Geometry

Whole Group

- Students and teacher will brainstorm a list of 2 dimensional and 3 dimensional shapes
- Students can go on a hunt for shapes around the classroom
- Students will look at pictures planets and see what shapes they see
- Teacher will read the story "Captain Invisible and the Space Shapes" to look for 3- dimensional shapes



Small Group

- Students will build pictures using 2-dimensional shapes and practice identifying shapes
- Students will build a rocket using 3-dimensional shapes and record the shapes they used
- Students can go in pairs on a hunt for shapes in the classroom or school
- Students will build 3-dimensional shapes using nets or play dough



Geometry Materials

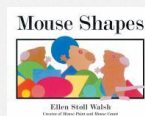
Geometry Materials to be added to the following centers:

Play dough- 3-dimensional shapes for students to practice building with
Creative Table- tooth picks and plasticine, 2-D shape cut outs to create shape art

Math Center- Geo-boards, pattern shape mats, three dimensional shape nets

Building center- Anchor charts of 2-dimensional and 3-dimensional shapes to help students identify shapes in their structures, graph paper for students to draw structures

Books



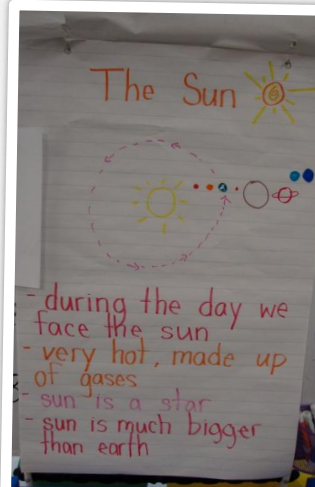
Science and Technology

- o 1.1 ask questions about and describe some natural occurrences, using their own observations and representations (e.g., drawings, writing)
- o 2.1 state problems and pose questions before and during investigations
- o 2.3 select and use materials to carry out their own explorations

Learning Experiences- Science

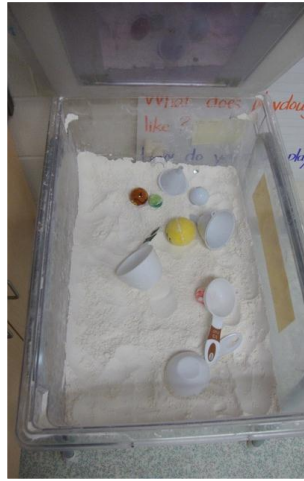
Whole Group

- Teacher will brainstorm a list of questions that students have about natural occurrences in their world around them and prompt students to ask questions about day and night, the seasons, the sun and the moon
- Teacher will show the students how to conduct experiments to answer some of their questions. One experiment would be a pin-hole camera to show the effects of the sun



Small Group

- Students will make their own paper mache planet- the teacher will prompt the students to pose questions about the consistency of the "glue" and problem solve how to make the paper stick to the balloon
- Sensory Bin- the students will ask questions about the flour and oil and use a variety of tools to experiment with
- Sand Table- which ball with make a bigger crater?
- Building- stating problems and posing solutions while building structures



Science Materials

Science materials to be added to each center:

Sensory Bin- Flour and Oil to create moon sand

Sand Table- different tools to create craters

Creative Task- Paper Mache: flour, water, newsprint

Building- pictures of tall rockets to encourage students to build tall structures



The Arts- Drama

Specific Expectation

- **D1.2** explore a variety of tools and materials of their own choice (e.g., *blocks, puppets, flashlights, streamers*) to create drama and dance in familiar and new ways

Learning Experiences- Drama

Whole Group

- Acting out the poem "4 little stars"

Small Group

- Taking on a variety of roles at the space station
- Using puppets to act out a familiar space story

Drama Materials

- Puppets or puppet bags to be added to dramatic play
- Items to pretend students are at a space station
 - Poem "4 little stars"



The Arts- Music

Specific Expectation

- **M1.1** demonstrate an awareness of personal interests and a sense of accomplishment in music (e.g., *contribute their own ideas to a class song; create their own accompaniment to a song*)

Learning Experiences- Music

Whole Group

- Singing the "Aikendrum song"
- Adding a beat to the song using instruments

Small Group

- Changing the lyrics of the "Aikendrum" song

Music Materials

- Aikendrum Song
- Objects that can be played to create a beat for the song (Eg. pot with paint sticks)

There was a man lived in the moon, in the moon,
in the moon. There was a man lived in the moon
and his name was Aikendrum.

And he played upon a ladle, a ladle, a ladle. He
played upon a ladle and his name was Aikendrum.

And his hair was made of spaghetti spaghetti
spaghetti. His hair was made of spaghetti and his
name was Aikendrum.

And his eyes were made of meatballs meatballs
meatballs. His eyes were made of meatballs and
his name was Aikendrum.

And he played upon a ladle, a ladle, a ladle. He
played upon a ladle and his name was Aikendrum.

And his nose was made of cheese cheese cheese.
His nose was made of cheese and his name was
Aikendrum.

And his mouth was made of pizza pizza pizza. His
mouth was made of pizza and his name was
Aikendrum.

And he played upon a ladle, a ladle, a ladle. He
played upon a ladel and his name was Aikendrum.

There was a man lived in the moon, in the moon,
in the moon. There was a man lived in the moon
and his name was Aikendrum.

The Arts- Visual

Specific Expectation

- **V2.1** explore a variety of tools, materials, and processes of their own choice to create visual art forms in familiar and new ways (e.g., *use natural and recycled materials at a learning centre*)

Learning Experience- Visual Arts

Whole Group

- Shared Reading: Using fictional books on space to show how the illustrator created the images

Small Group

- Paper Mache Planets
- Moon paintings using balloons
- Creating constellations

Visual Art Materials

- A variety of art materials that promote decision making and unique artwork



Health and Physical Activity

- **2.1** participate actively in creative movement and other daily physical activities (e.g., dance, games, outdoor play, fitness breaks)

Learning Experiences- Physical Activity

Whole Group

- Space Tag
- Space movements (moon walk, rocket speed, floating)
- Space Freeze Dance

Small Group

- Rocket ship hopscotch

Physical Activity Materials

- Hopscotch or chalk
- Space music



Provisions for Exceptional Learners

Accommodations may include

- providing extra time
- providing one on one support
- pairing with another student
- re-teaching
- providing an example or model
- using special resources (e.g., listening devices, special computer software, pencil grips, etc.)



Modifications may include:

- changing existing grade level expectations to something that the child can manage successfully

Enrichment Opportunities

Open ended challenges can be presented to students. Students who require enrichment can be asked to see if there is another way to solve the problem and to demonstrate how they solve their problem.

Examples related to this unit:

Building: How can you use less blocks but make your rocket taller

Modifications may include:

- reaching forward to future grades for expectations



Assessment

Formative- regular check ins will occur throughout the unit to inform upcoming teaching through the use of digital documentation

Summative- Pre and Post assessment will be done to assess 2-D and 3-D shape knowledge. Pre and Post assessment will be taken to see what knowledge students have of text features.

Observational- Notes and photos will be taken while students are engaged in centers to note interest, comments, thinking- to guide future lessons.

Anecdotal Notes- will be taken during Read-a-louds, shared reading, guided reading, guided and independent writing and while students are engaged in centers. This will help to capture students thinking and knowledge as well as next steps for future learning .

Example of anecdotal assessment template:

Personal/ Social

Children have a strong sense of identity and well being.

1.1 recognize personal interests, strengths, and accomplishments

1.2 identify and talk about their own interests and preferences

1.3 express their thoughts and share experiences

2.1 demonstrate self-reliance and a sense of responsibility

2.2 demonstrate a willingness to try new activities

2.3 demonstrate self-motivation, initiative, and confidence in their approach to learning by selecting and completing learning tasks

2.4 begin to demonstrate self-control and adapt behaviour to different contexts within the school environment

2.5 interact cooperatively with others in classroom events and activities

3.1 recognize people in their community and talk about what they do

3.2 recognize places and buildings within their community

3.3 develop an awareness of ways in which people adapt to the places in which they live

Yash	Taryn	Krish	Chloe	Dorisha	Karim
Avery	Dylan	Nadja	Laila	Ethan	Daniel
Luke	Zdeno	Yasmin	Olivia	Silvana	Thisarae
John	Diya	Ethan L.	Claire	Henry	Melissa
Rowan	Lope	Rebecca			

Possible Unit Extensions

- Inquiry Unit on flight
- Building a class solar system
- Comparing build and natural structures
- Measurement- how tall, how far, how much

