



Summary

How the World Works

Subject

English, Mathematics,
Science Lab, Social Studies

Year

PreK

Start date

Week 2, March

Duration

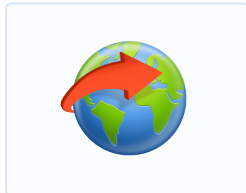
9 weeks



Inquiry



Transdisciplinary Theme



How the world works



The Central Idea

Movement changes objects and light.

Students will explore the movement of an objects shadow or reflection by changing the position of a light/reflection or the position of the object (simulate the sun's movement).



Lines of Inquiry

- shadows and reflections
- types of movement
- causes of movement



Teacher questions


- Why do we see shadows?
- What makes shadows change?
- What is a reflection?
- Why can't we hold onto shadows or reflections?
- What are different ways things move?
- What can we do to make things move?
- How does wind make things move?
- How do machines help us move things?



Key and Related Concepts



Key Concepts

Key Concepts	Key questions and definition	Rationale	Related concepts	Subject Focus
 Causation	Why is it as it is? The understanding that things do not just happen; there are causal relationships at work, and that actions have consequences.	Students will be engaged in activities that promote and show the correlation between action and result through movement.	change, properties, and light	Science Lab



Developing IB Learners



Learner Profile



Knowledgeable



Thinkers

Description

Thinkers: Students will use critical thinking skills to understand the concept of movement.

Knowledgeable: The students will develop new knowledge and understanding of concepts related to movement and change.

Curiosity

Enthusiam



ATL Skills



Approaches to Learning

Description

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Knowledgeable: The students will develop new knowledge and understanding of concepts related to movement and change.



Communication Skills



- Exchanging information - Listening, interpreting and speaking

Listening

Listen to, and follow the information and directions of others.

Listen actively to other perspectives and ideas.

Ask for clarifications.

Listen actively and respectfully while others speak.

Speaking

Speak and express ideas clearly and logically in small and large groups.

Give and receive meaningful feedback and feedforward.

State opinions clearly, logically and respectfully.

Discuss and negotiate ideas and knowledge with peers and teachers.

Communicate with peers, experts and members of the learning community using a variety of digital environments and media.

- Literacy - Reading, writing and using language to gather and communicate information

Writing

Use appropriate forms of writing for different purposes and audiences.

Paraphrase accurately and concisely.

Record information and observations by hand and through digital technologies.

Use a variety of scaffolding for writing tasks.

Organize information logically.

Make summary notes.

Communicate using a range of technologies and media.

Understand and use mathematical notation and other symbols.

Responsibly participate in, and contribute to, digital social media networks.



Action



Student-initiated Action

Students brought in shadow pictures that they created at home using their pets or family members.



Assessment & Resources



Ongoing Assessment



IB PYP Homeroom (PreK)

What are the possible ways of assessing student learning in the context of the lines of inquiry? What evidence will we look for?

Reflection Drawings

Obstacle Course

What are the possible ways of assessing students' understanding of the central idea? What evidence, including student-initiated actions, will we look for?

Shadow and Movement Drawing - The students will draw the sun according to the placement of a shadow on the ground. Students will explain their reasoning.

Shadow Movement Flip Book

What are the possible ways of assessing students' prior knowledge and skills? What evidence will we look for?

Discussion using teacher questions. The answers given by students will determine at which level of knowledge to start.

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Learning Experiences

Designing engaging Learning Experiences

Literacy: All activities utilize shadows, reflections, and movement vocabulary

- Rhyming Bingo
- Long O Hop



IB PYP Homeroom (PreK)

- Fast and Slow Sounds
- Roll, Slide, Swing
- Sound Parade
- My Muscles
- Weather Picture Sort
- A Windy Day
- Favorite Machines

Math:

- Shapes within Shadows/Reflections
- What am I? (using shadows/reflections)
- Moving Shapes
- Composing and Decomposing Shapes
- Comparing Long and Short Steps
- Comparing Lengths
- Build It!
- Walking Tall, Walking Short!
- How High Can You Go?
- Starting Line!
- Filling Containers that Move
- Line Up!
- Weight in Moving Objects

Social Studies and Science:

- Describe a Shadow - Shared Writing
- Follow the Safety Rules
- Moving Shadows
- Shadow Maker
- Keep Track of the Sun
- Why do Shadows Change?
- Floating Boat (Water Reflections)
- Let's Make Light!
- Reflections All Around Us
- Mirror, Mirror, on the Wall
- Our Sky!
- It's
- Electric
- Measure It!
- What Happens and Why?
- Roll, Blow, Bounce
- Simon Says to Exercise (Body Movements)
- Wagon Weights
- Stack'em Up!
- Push and Pull
- By Land, Air, and Water
- What Blocks the Wind?
- Weather Movement - What Will The Wind Do?
- Moving and Building
- Ramp Up for Fun!



IB PYP Homeroom (PreK)

- All Kinds of Energy
- Machine Movement - A House Made From Earth

Provocations

Shadow Puppet Activity



Stream & Resources



Resources



Note posted on Aug 15, 2019 at 9:49 AM

A lead teacher and assistant teacher, parent and community volunteers, theme related centers, interactive whiteboard, Hatch tablets, I-pads, cd-player, student computers, concept vocabulary cards, content area manipulatives, center related props, theme related books and thematic classroom board.

Classroom environment will display them related concepts, display of theme related vocabulary and literature, clearly defined theme related centers that promotes a literacy rich environment. Theme related in house and community field trips through community partners.