LESSON PLAN

Season 2/Episode 12

Time Your Swings!

(Investigating 'Swinging')

Let's Find Out features Captain Zoom and her crew of scientists with exciting experiments, curious kids and a trip to a faraway place.
Produced with support from Science Foundation Ireland.

Class Level:	First/Second Class
Strand:	Energy and Forces
Strand Unit:	Forces
Content Objective:	• Investigate how forces act on objects

Assessment Method(s):

- Teacher observation
- Teacher designed tasks and tests
- Work samples
- Self-assessment
- Conferencing
- Portfolio assessment
- Concept mapping
- Questioning

Lesson: Time Your Swings!

Lesson Introduction

- The teacher will begin the lesson using WALT and WILF.
- Question the children on their prior knowledge of swings.
- Click HERE for a whole class demonstration on the experiment. A pendulum consists of a fixed point, a long connecting bit and a weight at the end. This video shows that a pendulum takes the same time to go over and back, no matter how heavy the weight on it is. (https://www.youtube.com/watch?v=uW54qQEvlQc&list=PLer4jkNChuybHYhU-YSs5LW-TuLKz_SQk&index=16)

Lesson Development

- Start swinging and once you are happy that your swinging is as high as you'd like then stop moving your legs and just let the swing move back and forwards without your help.
- Ask your friend to start the timer and to count how many swings you do in 30 seconds. How many swings did you do in that time?
- Now swap with your friend and get them to start swinging like you did and then time them for 30 seconds while you count the swings. If possible, try to get them to start from higher up than you - but don't push them! How many did they get?
- Now attach your favourite teddy to the swing and push them to get them started, then leave them to swing for 30 seconds. How many swings did they get?

Lesson Conclusion

- Talk and Discussion
- Discuss children's observations

Lesson: Time Your Swings!

Resources	Methodologies	Linkage/Integration
An outdoor swing A timer A friend Your favourite teddy	Talk and Discussion Active Learning Skills through Content Use of the Local Environment Problem Solving	Add in at teacher's discretion

Inclusion and Diversity/Differentiation (Differentiate at teacher's discretion)

Content:
Product:
Activities:
Environment:
Resources:
Teaching Strategies:

Scientific Explanation:

Did you find that all of you had the same number of swings in one minute? Although that may seem strange, it is a scientific discovery that was first spotted by a famous scientist called Galileo Galilei in the 17th century. Galileo noticed that things would swing at the same rate or speed regardless of how heavy or light they were, once the length of the string was the same. Just like in your investigation, you and your friend and your teddy swung at the same speed because the length of the swing was kept the same.

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Let's Find Out is made with the support of Science Foundation Ireland.