

Name(s): _____

Date and subject: _____

Main Activity: Merry-Go-Round

Student Worksheet

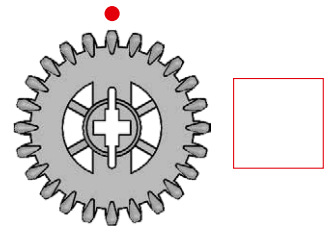
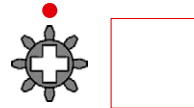


1. First, build Merry-Go-Round Model A6 and make it turn.

Follow Building Instructions A, pages 34 to 42, steps 1 to 11.



2. Count the teeth on the gears. Start counting from the dot.

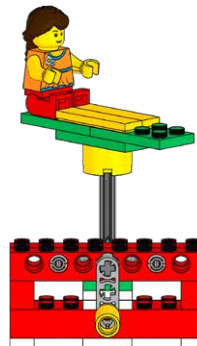


3. Then look carefully at the pictures of the models and compare Merry-Go-Round Model A6 to Merry-Go-Round Model A7.

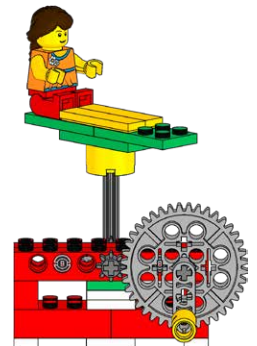
- Circle what is different.



A6



A7



- What do you notice? Explain how the models are different.



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4. Next, look carefully at the pictures of the models and make a prediction.

If I compare model A6 to model A7, then I think Merry-Go-Round Model (A6 / A7) will turn faster.

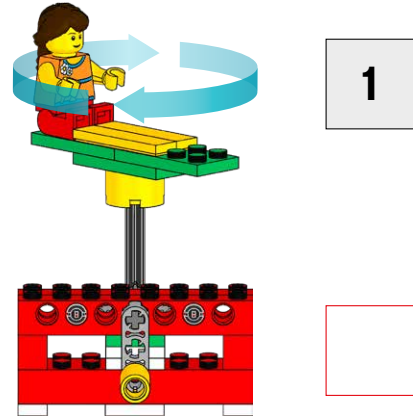


A6	
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A7	
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5. Test Merry-Go-Round Model A6.

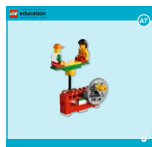
- If you want Sam or Sally to make a full turn, how many times must you crank the handle?



Write down your answer.
Remember to try at least three times for a fair test. It is important to keep an eye on
a) where your handle start position is and
b) where Sam or Sally's start position is on the Merry-Go-Round.

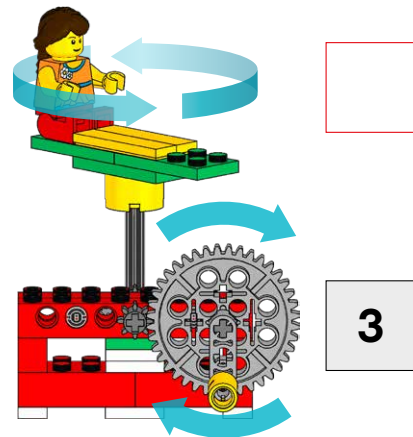
6. Build Merry-Go-Round Model A7 and make it turn.

Follow Building Instructions A, pages 44 to 52, steps 1 to 11.



7. Test Merry-Go-Round Model A7.

- If you crank the handle three times, how many times does Sam or Sally take a full turn?



Write down your answer.
Remember to try at least three times for a fair test. It is important to keep an eye on
a) where your handle start position is and
b) where Sam or Sally's start position is on the Merry-Go-Round.

8. Finally, draw a conclusion and check your prediction.

My tests show that Merry-Go-Round (A6 / A7) turns faster.





A6	
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A7	
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My prediction was (right / wrong).



	
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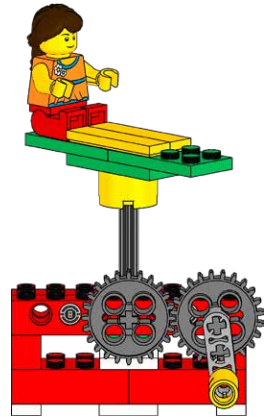
	
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Explore the effect of the different gearings illustrated. Build them into the Merry-Go-Round one after the other.

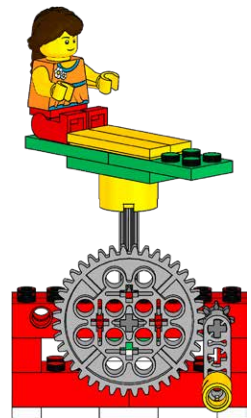
What do you notice?
Explain how the gearings are different.
Record observations.



Three horizontal dotted lines for writing observations.



Three horizontal dotted lines for writing observations.



Draw some gear trains (many gears meshing), or some everyday machines and mechanisms where gears are used.



A large empty rectangular box for drawing gear trains or mechanisms.