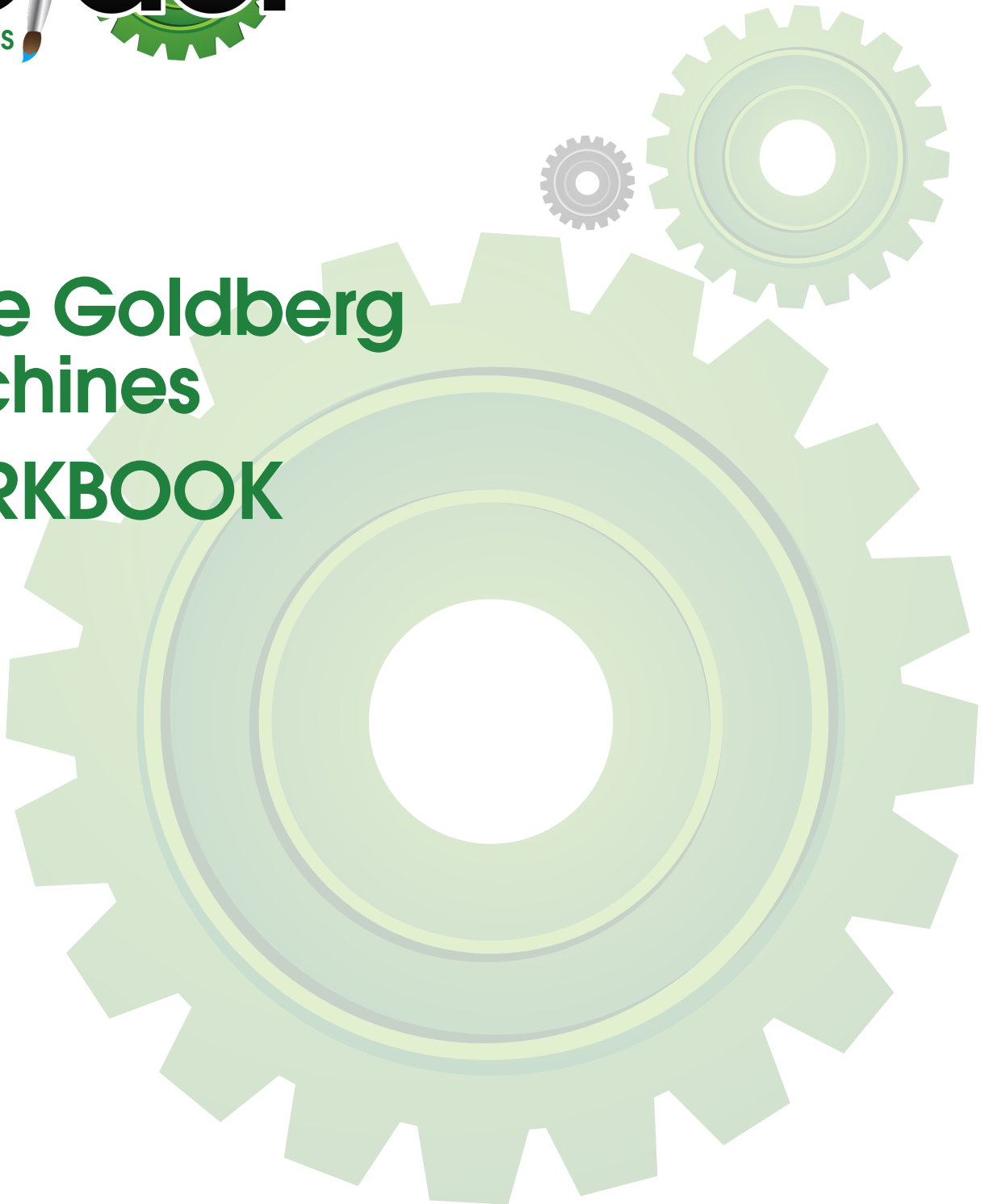




# Rube Goldberg Machines WORKBOOK



## WORKSHEET 1A: SIMPLE MACHINES

A Simple Machine is:

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Some examples of machines that can do work but don't use electricity are:

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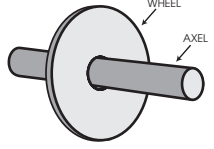
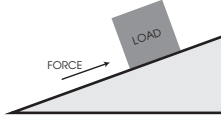
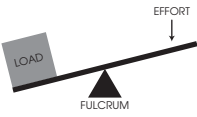
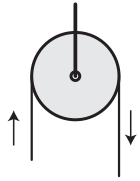

The six kinds of Simple machines are (include name and a sketch for each):


Your teacher has six examples of simple machines – classify them here:

CATEGORY	MACHINE NAME(S)
Inclined Plane	
Wedge	
Lever	
Screw	
Wheel and Axle	
Pulley	

# WORKSHEET 1A: SIMPLE MACHINES SCAVENGER HUNT

Team Name: \_\_\_\_\_

Wedge	Wheel & Axle	Inclined Plane	Lever	Pulley	Screw
					

Circle the items you found that are compound machines

## WORKSHEET 2A: THE LAUNCH CYCLE

### PHASE ONE



### PHASE TWO

Ask Tons of \_\_\_\_\_



### PHASE THREE

Generate \_\_\_\_\_ and analyze them



### PHASE FOUR

Create a \_\_\_\_\_

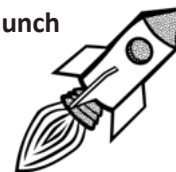


### PHASE FIVE

Highlight and \_\_\_\_\_



PHASE SIX – Launch



**WORKSHEET 2A: THE LAUNCH CYCLE (TEACHER'S GUIDE)**

**PHASE ONE**



**Look**



**Listen**



**Learn**

**PHASE TWO**

Ask Tons of **Questions**



**PHASE THREE**

Generate **Ideas** and analyze them



**PHASE FOUR**

Create a **Prototype**  
(or first draft)

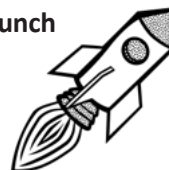


**PHASE FIVE**

Highlight and **Fix**



**PHASE SIX – Launch**



## WORKSHEET 3A: BEGIN WITH THE END IN MIND

What simple task will your machine accomplish? Come up with three ideas to start the discussion with your team.

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

Our Team's Machine will: \_\_\_\_\_  
(After your team discusses everyone's ideas, write the goal you select here.)

What simple machines would you like to use (or could you use), to accomplish the desired end goal?  
Draw pictures and write a brief description of your ideas.

Simple Machines used:  Lever  Inclined Plane  Screw  Pulley  Wedge  Wheel and Axle

## WORKSHEET 3B: PUTTING IT ALL TOGETHER – PLANNING THE WHOLE MACHINE

Our machine's simple task (The Goal):

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IDEA ONE	IDEA TWO	IDEA THREE
IDEA FOUR	IDEA FIVE	IDEA SIX

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## WORKSHEET 3C: SEQUENCE PLANNING AND SUPPLIES

In the space below, draw the steps of your machine (or write a description for each step in the correct sequence).

What supplies do you need to build your machine? Think about each step in order and make a list.



## WORKSHEET 4A: TEAM ASSIGNMENTS

Think about the work that needs to get done to build your machine. How would you like to divide it out so everyone has a project or role to play, and all the work gets done?

What tasks need to get done? Is there an order or sequence to the tasks?

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_
7. \_\_\_\_\_
8. \_\_\_\_\_
9. \_\_\_\_\_
10. \_\_\_\_\_

Do some people have more than one task or role?

\_\_\_\_\_

Are there tasks or roles that you can assign later?

Name: \_\_\_\_\_ Role/Project: \_\_\_\_\_

Name: \_\_\_\_\_ Role/Project: \_\_\_\_\_

Name: \_\_\_\_\_ Role/Project: \_\_\_\_\_

Name: \_\_\_\_\_ Role/Project: \_\_\_\_\_

Name: \_\_\_\_\_ Role/Project: \_\_\_\_\_

Name: \_\_\_\_\_ Role/Project: \_\_\_\_\_

Name: \_\_\_\_\_ Role/Project: \_\_\_\_\_

Name: \_\_\_\_\_ Role/Project: \_\_\_\_\_

Name: \_\_\_\_\_ Role/Project: \_\_\_\_\_

## WORKSHEET 4B: EXAMPLE OUTLINE

Describe what you learned about Rube Goldberg, and what a Rube Goldberg machine is

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Talk briefly about simple machines and what they do

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Talk about how you designed your machine

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Talk about the roles you each played in constructing your machine

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Describe the changes you made and lessons you learned that helped you arrive at this machine – your final Rube Goldberg machine

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**RUN YOUR MACHINE**

