

Light Bulb Project with Lamp Extension

Time allotted: 1 week

1. Research the Light Bulb design you want to make, but only tutorials for certain bulbs will be provided.
2. Start constructing your Light Bulb, follow the videos or use them as guides
Links:
Standard Bulb (Skip to 1:35): <https://www.youtube.com/watch?v=UKVKg-SmlIM>
Fluorescent Bulb:
 - Short: <https://www.youtube.com/watch?v=C76by51sXql>
 - Longer and More Detailed: <https://www.youtube.com/watch?v=Y-clA7F3ctE>
3. After completing your bulb make it self-illuminate
Video detailing this: https://www.youtube.com/watch?v=YfzFU_aa74k
Keep in mind not all materials have a self-illumination feature.

Extension – Lamp:

1. Construct a lamp frame (floor or desk for example) for your light bulb to be held in. This uses no tutorial

Make sure to put your bulb in your lamp when you are done

North Carolina 6-Point Lesson Plan

Subject: Autodesk Inventor	Topic: Modeling a Light Bulb in Autodesk Inventor
Teacher: Martinez	Date:11/19/19

Activity	Description of Activities and Setting	Materials and Time
I. Focus and Review (Establish prior knowledge)	Students will research what light bulb they would like to make	Half a day A computer – no specific website chosen
II. Statement (Inform student of objectives)	The assignment sheet will be given out and that lists the objectives	On same day as when students will look research which light bulb they want to make Assignment sheet
III. Teacher Input (Present tasks, information, and guidance)	The assignment sheet lists general steps to be followed when completing the assignment. Teacher can read through if they choose	On same day as when students will look research which light bulb they want to make and objectives Assignment sheet
IV. Guided Practice (Elicit performance, provide assessment and feedback)	Students shall start to construct their light bulb. They may use the provided videos as guidance or tutorials	1.5 days Standard Bulb: https://www.youtube.com/watch?v=UKVKg-SmIIM Fluorescent Bulb: Short: https://www.youtube.com/watch?v=C76by51sXgl Longer and More Detailed: https://www.youtube.com/watch?v=Y-clA7F3ctE
V. Independent Practice -- Seatwork and Homework (Retention and transfer)	After completing the light bulb students will make them glow/self-illuminate Video guide included	.5 days https://www.youtube.com/watch?v=YfzFU_aa74k
VI. Closure (Plan for maintenance)	Finally there is an extension to this project – to construct a whole lamp Students will pick what lamp they would like to make and construct it. No videos	2 days This project has no videos and is supposed to test students own ability. You may want to separate this from the main part of the assignment and revisit it later.

	included. This can be revisited late in year.	
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Drone/Quad copter Project

Time allotted: 1 week

1. Research the drone/quad copter design you want to make – a simple FPV drone video will be provided

2. Start constructing your drone, follow the video or use it as a guide

Links:

FPV Drone: <https://www.youtube.com/watch?v=Q6CjiXqHC70>

FPV Drone Base: <https://www.youtube.com/watch?v=DbXQBoiuByk>

3. After completing you are going to animate it

Minimum things you want to animate:

Propeller – make them spin

The whole drone – make it fly through the sky

North Carolina 6-Point Lesson Plan

Subject: Autodesk Inventor	Topic: Modeling a Drone in Autodesk Inventor
Teacher: Martinez	Date: 11/19/19

Activity	Description of Activities and Setting	Materials and Time
I. Focus and Review (Establish prior knowledge)	Students will research what drone model they would like to make	Half a day A computer – no specific website chosen
II. Statement (Inform student of objectives)	The assignment sheet will be given out and that lists the objectives	The assignment sheet will be given out and that lists the objectives
III. Teacher Input (Present tasks, information, and guidance)	The assignment sheet lists general steps to be followed when completing the assignment. Teacher can read through if they choose	On same day as when students will look research which drone they want to make and objectives Assignment sheet
IV. Guided Practice (Elicit performance, provide assessment and feedback)	Students shall start to construct their drone. They may use the provided videos as guidance or tutorials	FPV Drone: https://www.youtube.com/watch?v=Q6CjiXqHC70 FPV Drone Base: https://www.youtube.com/watch?v=DbXQBoiuByk
V. Independent Practice -- Seatwork and Homework (Retention and transfer)	After completing the drone students will animate them This part should be the propellers No video included	.5 days Students should be able to do this without any video

<p>VI. Closure (Plan for maintenance)</p>	<p>Finish animating their drone</p> <p>This part should be the flying and extra bits if they choose</p> <p>No video included</p>	<p>1.5 days</p> <p>Students should figure out on their own how to animate it.</p> <p>Also time for extra things if they so choose.</p>
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