

# Ames Public Library @HOME Activities

## Art and Engineering

Art is about creating meaningful things. Engineering is about creating objects that have a purpose. When art and engineering work together, STEM becomes STEAM. STEAM integrates art in STEM learning to create objects of beauty, purpose, and meaning. To learn more see a related video on the Library's YouTube Channel at <http://bit.ly/APLvideos>.

## Books and Media:

Title	Author / Performer	Call Number
<i>Crafty Science</i>	Bull, Jane	J 507.8 BUL
<i>STEAM Kids: 50+ Science, Technology, Engineering, Art, Math Hands-on Project for Kids</i>	Carey, Anne	J 507.8 CAR
<i>STEM LAB</i>	Challoner, Jack	J 507.8 CHA
<i>365 Weird, Wonderful Science Experiments</i>	Harris, Elizabeth	J 507.8 HAR 2017
<i>STEAM Lab for Kids: 52 Creative Hands-on Projects Using Science, Technology, Engineering, Art and Math</i>	Heinecke, Liz Lee	J 507.8 HEI
<i>The 101 Coolest Simple Science Experiments</i>	Miller, R, Homer, H, & Harrington, J	J 507.8 ONE
<i>3-D Engineering: Designs and Build Practical Prototypes with 25 Projects</i>	May, Vicki V.	J 620 MAY
<i>Let's Learn (DVD). S.T.E.M Vol. 2</i>	(Niclelodeon)	J 500 (DVD) STE

## Websites:

URL	Notes
<a href="https://learning.strawbees.com/">https://learning.strawbees.com/</a>	Great website for learning how to use Strawbees connectors in a variety of different ways.

## Take Away Kit: Strawbees

### Bag Contents:

- 10 straws
- An assortment of Strawbees connectors

To learn how you can use the Strawbees connector with the straws watch the @Home Activity video on the Library's YouTube Channel at <http://bit.ly/APLvideos>.

In your bag is a set of straws and some Strawbees connectors

### *What are Strawbees?*

Strawbees are type of building tools that can be used to create, make, and share many things from simple shapes to wearable art. The Strawbees that you have are made from recycled plastic.

### *What can you build with Strawbees?*

You can use the Strawbees connectors and the straws provided to make simple or complex structures, the possibilities are endless. The connectors can be used multiple times. They also work with cardboard.

Strawbees are a great tool to develop creative thinking and encourage exploration and experimentation.

Source: <https://learning.strawbees.com/strawbees-learning/>

# Vocabulary

*21<sup>st</sup> Century skills are skills that students need to succeed. These are skills that will help students think deeply and find creative ways to solve problems. They include the following:*

Critical thinking – Finding solutions to problems.

Creativity – The ability to think up and design new inventions, create works of art and solve problems in a new way.

Collaboration – Working with others.

Communication – Sharing ideas and exchanging information or news.

Information literacy – Knowing what information you need, organizing a way to search for it, finding resources, and deciding if it is good information.

Media literacy – Receiving information from different types of media including the television, radio, books, and magazines and understanding what to trust.

Technology literacy – Learning what types of tasks different gadgets do and why.

Flexibility – Being able to adapt to change in a positive way.

Leadership – Leading and helping a team to accomplish a goal.

Initiative – Starting projects, planning on one's own. Being a self-starter.

Productivity- Being able to complete work in an appropriate amount of time.

Social skills – Meeting and working well with others.

Source: Stauffer, Bri. What Are 21<sup>st</sup> Century Skills? [Blogpost]. <https://www.aeseducation.com/blog/what-are-21st-century-skills>

