

## Section 2

### Understanding Structures and Mechanisms

#### EXPLORATION 1

## The Best Fastener

Discover how different fasteners are used.

When we need to join things together, we use fasteners. Fasteners are made from different materials and come in various shapes and sizes. Different fasteners are used for holding different objects together.

### Fasteners for...

- **jackets:** Velcro, zippers, buttons
- **wood:** screws, nails, nuts and bolts
- **shoes:** shoelaces, Velcro

Fasteners are useful to us and can be found everywhere. But did you know that different fasteners hold things together in different ways?



## Section 2

### Understanding Structures and Mechanisms

#### EXPLORATION 1

## The Best Fastener

In this experiment, you will explore different types of fasteners to see how they hold paper together.

**Level of Difficulty:**

easy

**Time Needed:**

30 minutes

### Hypothesis:

**Circle the word to show your hypothesis.**

Different types of fasteners hold paper in **different / similar** ways.

*Do this experiment with a friend or family member for more fun!*

### Materials:

- 16 note cards

- white glue



- paper clip



- tape



- brass fastener



- hole punch

- string



- elastic band



- modelling clay



- binder clip



## Section 2

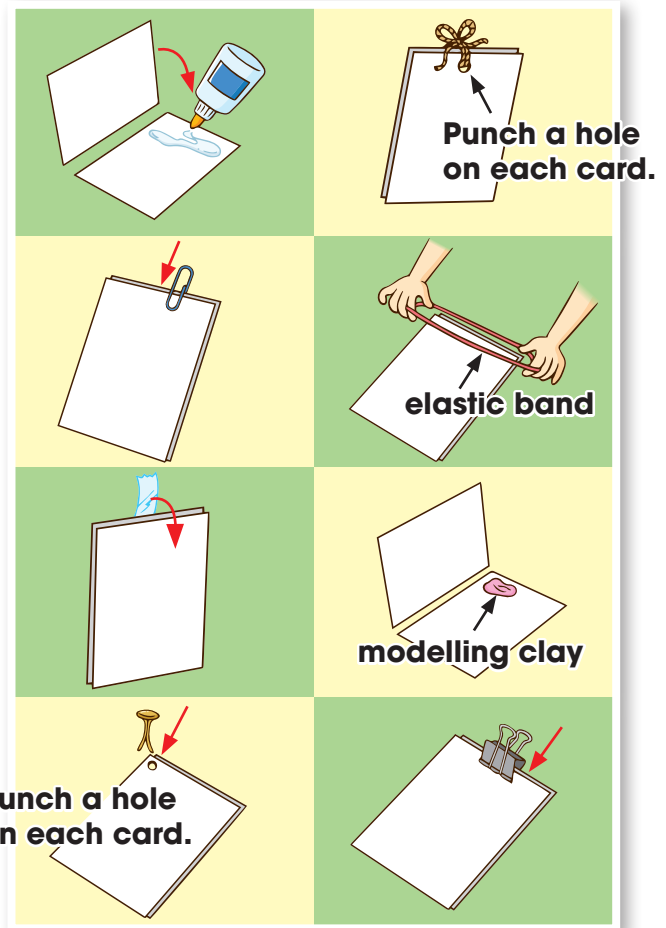
### Understanding Structures and Mechanisms

#### EXPLORATION 1









## The Best Fastener

### Steps:

1. Put two note cards and one fastener in a group.
2. Secure the note cards with the fastener.
3. Test the fasteners and write your records in the chart.



### My Record

Fastener ✓/✗								
Can the fastener hold the cards firmly?								
Can the cards be separated easily?								
Is the fastener reusable?								

## **The Best Fastener**

### **Conclusion:**

**Read the conclusion. Circle the correct word.**

There are many types of fasteners that can be used to hold paper together, but they perform in different ways. Some can hold paper firmly and some allow movement.

My hypothesis was **correct / incorrect** .

### **Explanation:**

Fasteners hold objects together but in different ways. Some, such as the brass fastener and the string, allow the note cards to move freely. Others, such as the glue and the binder clip, do not allow any movement between the note cards.

Also, some fasteners are easier to remove than others. This is because fasteners such as the paper clip are made to be used many times. Other fasteners, like tape, can only be used once.

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### Understanding Structures and Mechanisms

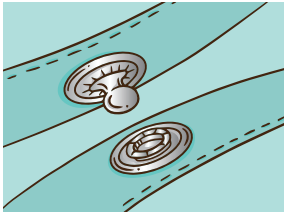
EXPLORATION  
**1**

## The Best Fastener

Name the fasteners for clothing. Check ✓ the correct circles.

string   snap button   zipper  
Velcro   button   buckle

1.

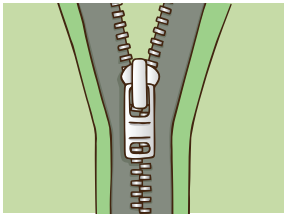


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Have you  
used it?



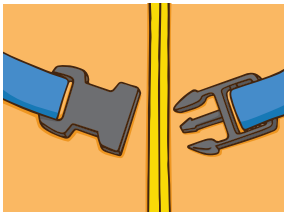
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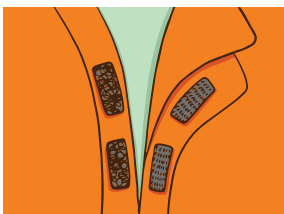
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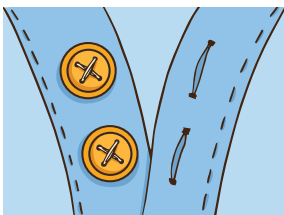
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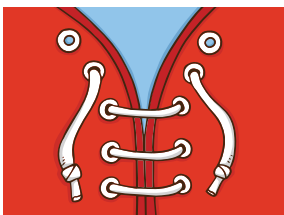
5.



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6.



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