

Wood Conceptual Story

FOSS - Kindergarten

K-12 Unifying Concept: Our physical world is made of substances, materials, and objects that can be identified by their unique properties, and is organized into systems that are interconnected.

Kindergarten Grade Level Concept: Matter has observable properties by which it can be described.

Sub-concept: There are different types of wood with properties that are alike and different.

**Lesson 1.1
Introduction to Wood Samples**

Students freely explore five uniform pieces of wood and discuss their properties.

Properties of substances

**Lesson 1.2
Wood Hunt**

Students conduct a wood hunt, matching their sample with ones hidden around the room. They label all the things in the room made of wood.

Properties of substances

Sub-concept: Different woods have properties that cause them to interact with water in different ways.

**Lesson 1.3
Wood and Water**

Students investigate how water interacts with particleboard and redwood samples.

Properties of substances
Conducting investigations
Evidence and explanation

**Lesson 1.4
Sink the Pine and Plywood**

Students freely explore how to sink pine and plywood samples using paper clips and quantify their results.

Properties of substances
Conducting investigations
Evidence and explanation

**Lesson 1.5
Sinking Investigations**

Students systematically investigate how many paper clips it takes to sink redwood and particleboard samples and graph the results.

Properties of substances
Conducting investigations
Evidence and explanation

Sub-concept: Wood can be physically changed by sanding or planing into smaller pieces.

**Lesson 2.1
Sanding Wood**

Students use sandpaper to physically change the shape of basswood.

Structure of matter
Physical change

**Lesson 2.2
Sawdust and Shavings**

Students conduct an investigation to discover how sawdust and wood shavings interact in water.

Structure of matter
Physical change
Conducting investigations
Evidence and explanation

Sub-concept: Some wood products are manufactured from smaller wood materials through laminating or gluing.

**Lesson 2.3
Making Sawdust Wood**

Students simulate the manufacture of particleboard by combining sawdust and a cornstarch matrix.

System
Structure of matter
Physical change

**Lesson 2.4
Making Sandwich Wood**

Students simulate the manufacture of plywood by gluing together thin pieces of wood.

System
Structure of matter
Physical change

Sub-concept: Wood can be transformed into useful and artful products by using woodworking tools and skills.

**Lesson 2.5
Nailing**

Students are introduced to the woodworking skill of nailing in order to join together two pieces of wood.

Physical change

**Lesson 2.6
Staining**

Students change the appearance of wood by staining it using tempera paint.

Physical change

**Lesson 2.7
Wood Sculpture**

Students use their woodworking skills to fashion a sculpture using wood, glue, and nails, and finish the project with stain or paint.

System
Physical change