

# MODELS OF ATOMS RESEARCH

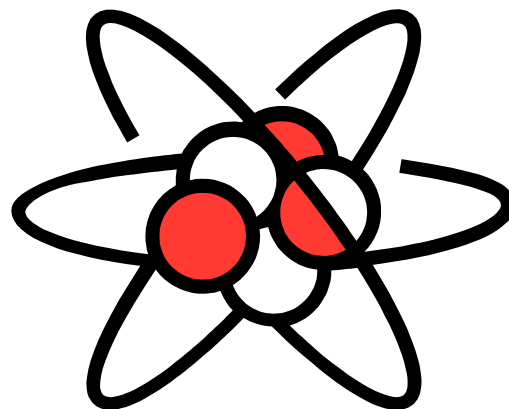
## INVESTIGATIONS IN SCIENCE 7

### Science Anchors

Science anchors are ongoing engaging tasks that students can work on independently. They are curriculum based, clearly defined and differentiated for students. Students can work on science anchors as they complete work at varying rates, when the teacher is working with small groups of students, at the beginning or end of the school day, or when they are waiting for teacher assistance. Sample science anchor tasks include: reading and responding to text, journaling, learning or interest centers, listening or viewing centers, independent research or projects and hands-on minds-on science kit tasks.

#### Purpose

Research a scientist that constructed a model of an atom. Write an interview to highlight your findings. Communicate why models are used to explain atomic particles and how your scientist made contributions to the advancement of science.



## INVESTIGATIONS IN SCIENCE 7

### Models of Atoms Research Project

#### Anchor Task

#### Overview

This anchor task is to be used by students in science as they are learning about atoms.

#### Goals

##### *Students should know*

elements are composed of atoms with different numbers of neutrons, protons and electrons.

##### *Students should understand*

how to identify common elements and explain that the elements are composed of atoms with different numbers of neutrons, protons, and electrons.

how atomic theory developed from Democritus to Bohr.

##### *Students should be able to*

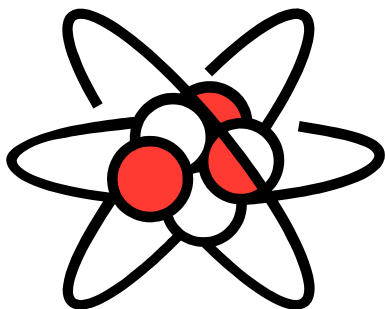
communicate why we use models to explain atomic particles.

explain how people from different cultures and times have made important contributions to the advancement of science, mathematics and technology in different cultures at different times.

#### Required Resources

- One copy of the Models of Atoms Research Project resource page per student
- Various print and electronic resources on the scientists who worked on models of an atom (see p.76 of *Chemical Building Blocks* Prentice Hall textbook for general overview)

## INVESTIGATIONS IN SCIENCE 7



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

### Models of Atoms Research Project

#### Anchor Task

#### Select a Scientist

Select and research one of the scientists who worked on models of the atom. Write an interview with this person to discuss his work with him. Be sure to include information about how his model was used to explain atomic particles

#### Scientists Who Worked on Models of the Atom

- Democritus
- John Dalton
- J.J. Thomson
- Hantaro Nagaoka
- Ernest Rutherford
- Niels Bohr
- James Chadwick

The scientist I will research is \_\_\_\_\_.

#### Research The Scientist

Use the resources provided to find at least ten interesting facts about your scientist. Record your facts on a separate sheet of paper.

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### Write An Interview

Write an interview in which you discuss your scientist's work with him. Your interview should be written in the format modeled below.

*Your Name:* (question generated by you)

*Name of Scientist:* (use your research findings to generate scientist's possible response)

*Your Name:* (question generated by you)

*Name of Scientist:* (use your research findings to generate scientist's possible response)

Your interview should include:

- at least 5 questions with responses
- information from your research in each response

**My Interview With** \_\_\_\_\_