

Apps, Inputs & Outputs, and the Design Process

Name: _____ Period: _____ Date: _____

Objectives

- Identify the inputs and outputs of a program (CRD-2.C, CRD-2.D).
- Describe the phases of a development process and what "iterative" and "incremental" mean (CRD-2.E).
- Design a program and its user interface from requirements (CRD-2.F).
- Explain how collaboration improves a computing innovation (CRD-1.A, CRD-1.B).

Directions: Answer each section. This is a design-and-planning worksheet — no code yet.

Section 1: Apps, Inputs, and Outputs

1. Define **input** and **output** in your own words. Give one example of each from an app you use.

2. What is a **user interface**? Name two things a user interface might include.

3. For a weather app, list two *inputs* it might take and two *outputs* it might produce.

4. Program output is usually based on what two things?

Section 2: The Development Process

A development process can be ordered and intentional, or exploratory. Four commonly used phases are: investigating & reflecting, designing, prototyping, and testing.

5. Put these development phases in a sensible order, then briefly say what happens in each: *testing*, *designing*, *investigating & reflecting*, *prototyping*.

6. Explain the difference between an **iterative** process and an **incremental** process.

Section 3: Designing a Program and Its User Interface

The design phase outlines how to accomplish a program's specification (its requirements).

7. What is a program **specification**?

8. List three ways a team could **investigate** what users need before designing an app.

9. You are designing an app that helps classmates pick a lunch option. Write one *requirement* for the app and sketch (in words) one screen of its user interface.

Section 4: Collaboration

Collaboration improves computing innovations.

10. Give two reasons collaboration that includes **diverse perspectives** produces better computing innovations.

11. What is **pair programming**, and how does it support collaboration?

12. Name one online tool that supports collaboration and explain how it helps a team share and give feedback.
