

Topic 1.1: Collaboration

LO: CRD-1.A, CRD-1.B, CRD-1.C | Skill: 1.C, 6.A | Scenario: 1A: The TideTrack App Team

Standards & Skills Map — Topic 1.1

Framework-aligned reference: the learning objectives, essential knowledge, and computational-thinking practices this topic targets. For teacher use during planning, observation, and feedback. These codes are teacher-facing only — they never appear on student materials.

Learning Objectives

- **CRD-1.A** Explain how computing innovations are improved through collaboration.
- **CRD-1.B** Explain how computing innovations are developed by groups of people.
- **CRD-1.C** Demonstrate effective interpersonal skills during collaboration.

Essential Knowledge

- **CRD-1.A.1** A computing innovation includes a program as an integral part of its function. Innovations can be physical (a smart watch), non-physical software (a photo app), or a non-physical concept (an encryption method).
- **CRD-1.A.2** Effective collaboration produces a computing innovation that reflects the diversity of talents and perspectives of those who designed it.
- **CRD-1.A.3** Collaboration that includes diverse perspectives helps avoid bias in the development of computing innovations.
- **CRD-1.A.4** Consultation and communication with users and potential users is important in the development of computing innovations.
- **CRD-1.A.5** Information gathered from potential users can inform the purpose of a computing innovation from diverse perspectives.
- **CRD-1.B.1** Online tools support collaboration by allowing programmers to share and provide feedback on ideas and documents.
- **CRD-1.B.2** Common models such as pair programming exist to facilitate collaboration.
- **CRD-1.C.1** Effective collaborative teams practice interpersonal skills, including communication, consensus building, conflict resolution, and negotiation.

Computational Thinking Practices

Practice 1.C — Explain how collaboration affects the development of a solution. **Practice 6.A** — Collaborate in the development of solutions (practiced in the Collaboration Activity; not directly assessed on the exam).

Unit Scenario cross-reference

Topic 1.1 connects to the Unit 1 collaboration theme. Our original **TideTrack App Team** scenario parallels that theme with entirely original content — no copyrighted scenario text is reproduced.

Assessment alignment

The exam tests collaboration conceptually (Section I multiple choice) and expects collaboration during the in-class programming project (Section II). This lesson's MCQ set rehearses the conceptual questions; the Collaboration Activity rehearses the project teamwork.