**Summary – Scratch in Informal Education**

* Scratch is being used to teach 21st century skills and fundamentals/concepts of computer programming
* There are many Scratch workshops being held at various museums and libraries across the United States and the world

*Scratch Workshops:*

* Range from formal (a teacher guiding students to create or modify a specific project) to informal (open-ended, self-discovery time)
* Range from single sessions to multi-week courses
* Generally broken into 1-2 hour sessions (but some are significantly longer)
* Usually run after school, over the weekend, or over the summer
* Most take place in a dedicated space
* Most require advance registration (some with an associated fee)
* Most specify an age or grade range for participants
  + Some invite parents to co-learn with their children
  + Some are girls only
* Most assume no previous knowledge of computer programming
* Depth vs Breadth: Some teach a single skill and add layers of complexity; some teach many different skills
* Starting from Scratch: Some have participants create their own project; some use previous projects as a jumping off point

*Aspects of a good learning experience:*

* Dedicated space
* Proper technology
  + Hardware: laptop and/or desktop computers, consider ratio of students to computers
  + Software: Scratch
  + Extras (optional): Lego WeDo, PicoBoard, MaKey MaKey, Kinect…
* Trained staff
  + Consider ratio of students to staff
  + Ideal to have at least two to three open-minded staff members
* Time
  + Structured activity with worked out schedule
  + Unstructured activity—time can become an issue
* Appropriate activity
  + Consider age, gender, and skill level of participants, and aspects above
* Cultivate interest (e.g. relating Scratch to video games or introducing the idea of going “behind the screen”)
* Ability to have continued learning (e.g. at home)
  + Accessing projects online (e.g. an online gallery)
  + Taking materials home (e.g. Scratch books)

*Key Terms (a selection):*

* Informal learning
* Constructionism
* Design-based learning
* Peer learning
* Community
* Digital vs tangible
* Physical manipulatives
* Storytelling
* Debugging
* Remixing
* BYOD (bring your own device)
* Levels of Online Participation: spectators, joiners, collectors, critics, creators
* Integration of Technology: entry, adoption, adaptation, appropriation, invention
* Workshop Guide: meeting one another, introducing and demoing Scratch, planning and creating projects, sharing and reflecting on experiences, preparing for next steps