The sketchbook is a basic tool in almost all design disciplines.
To set the scene, remember the design funnel.

First, each stage is iterative, where one constantly generates and reduces ideas until resolution.

Second, the granularity of exploration and development is finer as these iterations progress.

Fundamentally, the sketchbook is a tool that supports this design funnel process, by cheaply and quickly collecting a multitude of ideas and their variations, and recording them for later choice.
The Sketchbook

Why a sketchbook?
- brainstorm many initial ideas – both good and bad
- explore & refine ideas both in the large and in the small
- develop variations, alternatives, details
- archive your ideas for later review
- reflect on changing thought processes over time
- communicate ideas to others by showing
- choose ones worth developing

- record good ideas you see elsewhere
- clip inspiring images from sources like magazines
- shoot, print and collect inspiring photos

Specifically, this is what a sketchbook affords
Sketchbooks are of little use if you don’t have it with you and you don’t use it. A sketchbook is really about getting into the idea of design, into the habit of sketching regularly and frequently.
Sketchbooks vary considerably. Some things you need to consider are:

- Durability – covers, page bindings (so they last)
- Page count (so you can fill them)
- Size (for carrying convenience)
- Whether you can fold them over (for ease of use in tight spaces)
- Physical and visual aesthetics (you should be proud to carry it; a badge of your profession)
While you can sketch on almost anything, the sketch doesn’t make a sketchbook.

Avoid cheap scrap books and exercise books, and bits of paper.

But of course, you can sketch on these and then paste it into your sketchbook.
The most basic instrument you need is a pencil, maybe an eraser. The key is to carry it with you always, maybe by inserting into the coil binding of your sketchbook.
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Later, we will talk about how you can use a sketchbook to collect found objects, like magazine clippings.

Scissors, glue, and tape will let you easily add these to your sketchbook.
Every now and then you will come across something that inspires an idea. Take a photo of it, print it, and paste it into your sketchbook.
Of course, there are myriads of media. Feel free to use them, but be careful. Remember, sketches should be cheap, fast, easy to do, and often of low fidelity. If media gets in the way of this, go back to a pencil.
So, now that you have a sketchbook and some instruments, what should be in your sketchbook?

The following illustrate some samples.

We will get into these and others in considerably more detail in later talks.
Sketching is about generating and collecting ideas.
If you can draw, great.
But an ugly, crude drawing can capture an idea as well as a beautiful one.
Let's look at a few examples of sketchbooks from various fields, where we see how they support idea generation, variation, and ultimately choice.

In this example, we see various sketches, where the artist is exploring and varying posture and form. Note how incomplete some of them are, where they let the mind's eye fill in possible details.
Artists do variations of a form, as studies that help them understand the nuances of that form.

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Sketchbook examples

Industrial designer
- ideas
- variations
- annotations

Form factors for wearable computer watch

Source: sketch page from student Industrial designer Samnang Eav

Industrial designers make fairly similar uses of sketches, in this case in exploring various ideas and details of a form factor.

Note that sketches such as these can include textual annotations, which themselves suggest possibilities.
Sketches serve many purposes.
This one collects four different versions of an idea

Source: Nicolai Marquardt sketchbook, with permission. See http://www.nicolaimarquardt.com/blog/
This example – in this case a photo – shows of 4 different remote control designs, where the sketches are made from paper taped on top of the lower part of a remote control.
Sketchbook examples

The key idea is to have many ideas, and many variations. Paper and pen is cheap and quick. Explore.
When you really understand the design space and the choices available, you can then proceed to build the product.
While this one shows how an idea flows over time, and the relationships between different parts of the idea
Sketches can also be storyboards, where key scenes are shown (much like a comic book)
Sketches can show storyboard transitions, where a different action can result in a different flow of activities
Sketches can also depict how an idea (or product) is used via visual scenarios, or stories.

Source: Nicolai Marquardt sketchbook, with permission. See http://www.nicolaimarquardt.com/blog/
Sketches can be used for collecting materials seen or found in other places; these can inspire you as well. Indeed, much creativity is about finding, varying, and remixing ideas that already exist.
Sketches vary significantly. This one is of very low fidelity (i.e., a crude drawing) and is heavily annotated.
While this one is almost a literal and highly detailed representation of what would expect a screen to look like at a moment in time.
Here is an example of a sketch generated by Susanna McPhail, who was developing an idea for a physically based instant messenger system.

Her concept was bugs (each representing one of her IM contacts) on a leaf, that would somehow light up and animate. This is one of her first sketches.
As she began to refine her idea, she started adding detail about how it could operate.
She then built the leaf out of papier mache, glass forms, clay, and wire – this is also a sketch!
Her final system – now a fully working prototype – shows the clear relation of her original sketch idea to the implemented system.
You now know

Sketchbooks are for:
- brainstorming, exploring, refining varying, archiving, reflecting, communicating and choosing ideas
- recording your ideas you see elsewhere

Sketchbooks are:
- convenient (pages, size, fold over), durable archive, aesthetic

Sketchbook instruments are:
- pencil
- optional eraser, sharpener, glue, tape, scissors, camera, and other media

Sketchbooks can be filled with:
- Your sketches (many different kinds) and found objects

Sketchbooks are used regularly
- sketch anywhere, anytime