Jamming for Smart Skills – Game Jams for the Classroom

What is a game jam?

As with so many things, Wikipedia has a definition for a Game Jam and it's the perfect start for this section.

> *A game jam is an event where participants try to make a video game from scratch. Depending on the format, participants might work independently, or in teams. The event duration usually ranges from 24 to 72 hours. Participants are generally programmers, game designers, artists, writers, and others in game development-related fields. While many game jams are run purely as a game-making exercise, some game jams are contests that offer prizes.*

This definition can be considered a starting point. Game jams have evolved to become such a broad genre of event, you can almost customize a jam to fit any niche. And that's one of the many reasons they work so well as a school project.

For example, Global Game Jam expands on the definition a little bit:

> *"Jam" is a reference to musical jam sessions. Similarly, the goal with a "game jam" is to come together and make a videogame, or a non-digital (analogue) game like a board game or card game. Participants rapidly prototype game designs and inject new ideas to help inspire and grow the global game industry. We share a common theme and constraints. We ask participants to create a game from beginning to end in a prescribed time. The brief time span is meant to help encourage creative thinking which results in small but innovative and experimental games, some of which have been developed beyond the GGJ into a commercial success.*

Jams aren't a new thing either. The earliest known game jam is SpeedHack, which began in 1999 and ran until 2015. SizeHack 2000 is another early jam.

So now you know a little more about what a jam is, why does it matter? What can a game jam bring to your classroom?

Why do we jam?

People jam for many different reasons. For some, it's just about having fun. For others, it's about learning a particular skill or breaking out of a creative block. For schools, jams are a great way to encourage students to work on specific skills while having fun on a creative project.

In industry. some studios use jams as a way for teams to take a break from their main projects. Allowing them more freedom to be creative and give them a bit of a refresh before returning to their main focus. It's also a great way for new teams to work on their communication and teamwork ahead of a new major project, especially if they've not worked together before.

Sometimes, jammers hit on such a great idea and their small project eventually becomes a full-blown indie game. Baba Is You was developed as part of Nordic Game Jam, Friday Night Funkin came from Ludum Dare and Goat Simulator was born from an internal jam at Coffee Stain. And these are just a handful of examples.

From a student's perspective, a jam can be a great way to create small projects to start building up a portfolio for their future career. Anything that displays technical or soft skills to an employer is always worth including in a portfolio, even if it's anecdotal.

What skills can I learn?

Game jams are a fantastic opportunity for your students to both hone existing skills and learn new ones – especially Smart Skills. The skills they'll practice will depend on how you've set up your jam, but we'll go over some key examples.

Smart Skills

It's never a bad thing to have your students working on their Smart Skills and your jam can offer a multitude of different opportunities.

For instance, if your event is based around a team structure rather than a solo jam, your students will have to be able to communicate with each other and work together in their teams. Some jams have a student fulfil a role as team leader or project manager – offering the chance to look at managerial skills.

One of the key features of a jam is its short timeframe. If your students only have 72 hours to finish their project, they'll need to be able to manage their time efficiently to get everything done. The tight timeframe can also offer a learning opportunity about feature creep and being able to trim their project down to the bare essentials – it's a key skill to be able to prioritise aspects of a project while potentially dropping others.

You may opt to have your students present their games to each other at the end of the jam as part of a judging process. You'll be able to have students on both sides of the table, honing their presentation skills by pitching their game, and learning how to critique each other's work through judging criteria.

In summary, the Smart Skills your students can work on with a jam-style activity include but aren't limited to:

- Communication
- Teamwork
- Leadership
- Time Management
- Critical Thinking

Technical Skills

The technical skills gained from a jam will also depend on how your event is set up – your students won't be learning computer science skills if the jam is purely on paper for example.

However, a jam is a great opportunity to focus on a particular skill set – if your students are getting used to a new program, you could run a jam that states they have to create something in that program. You may determine that all games must be made using a particular engine such as Construct 3 or Unity. (We might be biased, but Construct 3 is ideal for jams due to the speed at which students can get a project up and running!)

This can extend to art and music design as well as to programming – students learning about pixel art might be required to use a program such as Aseprite to generate all of the artwork for the game.

In one of our case studies, you'll see a variety of technical skills being worked on by the students involved.

Though as an example, if you were running a week-long jam where students had to build a prototype game, you could expect them to work on various technical skills including:

- Game design
- Programming and Pseudocode
- Computational Thinking
- Design documentation
- Sound Design
- Level Design
- Character creation
- Narrative design and storytelling

How to run a Game Jam

Running a game jam will require a good amount of planning as there are many variables you'll want to choose for your event. However, once you've settled on your initial parameters, it's a format you can either reuse time and again, or tweak to suit your students' needs.

The main things you need for a jam are:

- A theme
- A timeframe
- Team structure

After that, you can give your students plenty of freedom! As part of this pack, we've included a worksheet for you to help plan your game jam. There is also a completed version of the worksheet as part of our case study example.

Themes

Let's start by looking at how themes are used in jams. While these events are aimed at fostering creativity, it can be very overwhelming to have the freedom to create *anything*. By having a theme, it gives a framework to build ideas around, even if that framework is just a simple word or phrase. Even with a single word, there will inevitably be different interpretations of the theme. For example, the 2025 edition of Global Game Jam the theme was Bubble. The jam saw entries centred around soap bubbles, thought bubbles, bubble tea, bubble wrap… You get the idea.

In the online jam Ludum Dare, each jam has its theme decided by the community in rounds of voting. Community members first submit suggestions for the theme, and then these are whittled down to the final choice by several rounds of community votes. You could get your students to do something similar!

A theme is also a great way to encourage cross-curricular learning. You might be running this jam in your Computer Science class, but the theme could be centred around a topic in History or Geography.

In some jams where you have a broad age range, it can help to include age ratings in the theme/parameters for the jam. PEGI Ratings or ESRB Ratings can give students a framework of what can and cannot be included in their game, as well as helping them learn about ratings systems and target audiences.

Timeframes

Part of the fun of a jam is completing a project in an allotted (usually short) timeframe. By limiting the time to something like a few days, jammers must home in on an idea and focus on getting something playable finished. Some suggest that the shortened timeframe also allows for more creativity as you can hyperfocus on one element of an idea rather than be overwhelmed by too many possibilities.

There is no set rule for how long a jam can last – it can be arranged around existing time constraints. If you've got a week at the end of a term or semester and your students need a project – give them a week to plan/build something. If you've got more allotted lesson time, you could reduce it to a few days, including homework. If you're just going for a short exercise to spark creativity, an idea jam can be done in a single lesson!

It's entirely your choice.

Team Structures

When it comes to your jam, you'll need to consider how students will be working. Will they be paired, in small groups or will this be a larger team effort? The choice is down to you and what works in your classroom. Pair programming is already a popular approach in computer science classrooms and there's no reason you couldn't extend that into your jam activities too.

As part of the team structure, you should also consider whether you want to have roles within each team. You could have one student acting as project manager and two programmers for example. Or perhaps you want an artist or narrative role in there. You'll also need to consider whether you want to assign the roles manually or have students self-assign based on what they believe their strengths are.

A lot of the Smart Skills from a jam come from having to build something as a team, but you can always opt to allow your students to work solo. Bear in mind that if you have a large number of students participating in the jam, solo jammers can cause an increase in workload for any teachers, facilitators and mentors you have involved in the project.

Speaking of mentors, if you have industry links within your school, this is the time to use them! Having local studios offer mentorship can really bolster your students learning.

Our two case study examples were both team-based game jams and we'll elaborate on their structures further below.

Troubleshooting

Sometimes, you may come across issues when running a jam. We've included some tips to try and minimise disruption and help your jam run smoothly.

If you're asking your students to use an external site for submission, for example a game jam site through itch.io, then you should ensure that students have all the resources they might need to upload to the platform before the jam starts. This should help reduce last minute submission panics!

Similarly, if you're using a cloud drive, especially across classes or schools, be sure to make sure all folders are correctly set up with the relevant permissions and test beforehand to ensure all students can upload their work correctly.

Any web-based tool that will be used by the students will need to be unblocked by the school prior to the jam. For example, as a web-based game engine, Construct 3 is ideal for jams and we provide a list of URLs schools should have whitelisted to ensure smooth program usage. Check other tools for similar resources.

If your jam also encompasses work outside of the classroom, you may want to consider an official method of communication to ensure that chat is monitored as it would be in the classroom. Tools like Discord allow you to set up your own servers with channels to act as a central hub for students to discuss project work. You can also assign roles or privatise channels so that students have their own chats that can then also be monitored by you or other appointed moderators.

If you're having a longer-term jam, or a jam across multiple ages, classes or schools, you will need to consider communication moderation and safeguarding. An example of effective communication for a jam is a private discord server, but this will need to be monitored and moderated, and rules set in place around students directly messaging each other outside of the server. Proper reporting methods should be in place if students find their peers breaking moderation rules.

Case Studies – Game Jams in Education

Ukie Student Jam

The Ukie Student Jam is an annual, competitive jam run for Ukie Student Members. Ukie is a non-profit trade association for the video game industry in the UK and Ukie Students is a part of their Education arm.

In 2025, the jam saw around 200 students aged 16+ from different colleges and universities across the UK join the event to make a video game from scratch. Students created their own teams, were encouraged to name their team – as if it were a studio and were paired with an industry mentor to give them advice throughout the jam. While every mentor is different, the consensus is that the addition of the mentors has a huge impact on student experience and overall satisfaction with the event.

The jam did allow solo participants, however it should be noted that this was discouraged purely to reduce workload on supporting faculties and to ensure that there were sufficient mentors for each team. On the point of solo jammers, one of the mentors made the point that students "could benefit from blending your skills, sharing the workload, and gaining valuable team-working experience that the video games industry is looking for."

Students could use whichever engine or technology they wanted to build their projects, but the games had to be playable on Windows and uploaded to itch.io as part of the submission process. Teams were able to include free open-source assets and Generative AI for some components of the game, where they felt they lacked the skills to do the work themselves. Though if either were used, they had to be correctly disclosed and referenced.

With a timeframe of just 32 hours, this jam was fully remote, though institutes were encouraged to set aside space for their students to work together. Due to the remote nature, students, faculties and mentors were all invited to a private Discord for communicating. Safeguarding and moderation frameworks were put in place to ensure the safety and wellbeing of all participants.

Games had to be playable as a Windows download and were submitted to a dedicated page on itch.io for judging. The submitted games were then assessed by the Shortlist Selection Panel who whittled the list down to 10 games to forward to the final Judging Panel.

Three awards were available:

- Overall Winner
- Technical Achievement
- Outstanding Design

Each award-winning team earned a prize pack and the opportunity to display their game at an event in Brighton.

As part of this case study, we've included an example of the Jam Planner Worksheet for the 2025 Ukie Student Jam, so you can see how you might fill the planner out for a jam of your own.

Stanmore College

In 2024, London's Stanmore College ran their first student game jam. With input from the college's industry partners, they gave their students a brief containing the theme and several prerequisites for their games.

Each industry representative presented a different aspect of the brief to the students:

Mayamada – Team Composition

Students were asked to consider the roles they might require in their team during the jam, ending up with a structure centred around programming, art/sound and a project lead.

The students involved were spread across two year-groups, so second year students were assigned as Project Leads. The rest of the cohort were then allowed to choose their teams, with a maximum of five per team, with emphasis put on putting together a well-balanced group based on skills as well as just working with friends.

Inhalation – Theme

The theme provided for this jam was the Five Senses – sight, sound, smell, touch and taste. Students had to incorporate at least one into their game but could have as many as they wished. Senses could be included in any format, from game mechanics, characters, narrative and setting, even in the sound design. The choice was entirely down to the students.

Scirra – Technical Requirements

All games for this jam had to be made using Scirra's 2D Game Engine, Construct 3. Further technical requirements were then imposed, requesting that students had to use one or both of the following: Timeline or Follow Behavior. Again, the implementation of these features was entirely down to the students but demonstrating how they implemented would be a key point of the final presentation.

The students had to generate all assets for the game themselves including any artwork, music and sound effects. This was another incentive for students to think beyond just working with their friends when putting together their team.

After a week of working on their projects, the teams then had to present their games, and how they fit the brief, to their peers and an industry panel. The panel would then offer feedback on the games and judge them to determine a winner.

Alternative Jam Ideas

The beauty of a game jam is that it is inherently customisable. You can tweak and change parameters and restrictions to suit your students' needs. This also means, you can do jam style activities with a huge range of students. Here are a handful of alternative jam ideas for different student groups:

The Idea Jam

If you're short on time or just want to introduce a jam-style activity to your students, then an Idea Jam is a great place to start. Rather than actually building a game, your students come up with an *idea* for a game. This can be done in a lesson, or over the course of several depending on how fleshed out you want your students' ideas to be.

Included in this pack is a worksheet that students can fill in during an idea jam and gives them starting points for putting their idea together. There is also a Game Breakdown worksheet designed to get students thinking about what goes into a game and how to identify a game's themes and mechanics.

If you've never discussed games in the classroom before, this can be a quick activity to get students thinking about a game in a more analytical way.

We've run the Idea Jam activity with both students and teachers and will discuss both the setup for it and feedback from it in a later chapter.

Part-baked Games

If you're working with younger students, or have a very limited timeframe for your jam, why not provide your students with a part-baked game as a starting point?

Part-baked games are games that are partially finished and are a great way to introduce smaller game design projects. By building out most of the game first, students already have a base to build on and can focus more on finishing the game, rather than getting lost in the weeds of building from scratch.

You could start with a basic platformer with one level and basic mechanics and then ask your students to build levels or additional mechanics to pad out the game according to a theme. This way, they already have a good chunk of code and assets to work with, and they don't have to spend time making them.

Digital Schoolhouse have several Part-Baked games workshops to give you an idea of how they work.

Non-Programming Jams

It might seem counter-intuitive for a Computing Resource to have a non-programming suggestion, but bear with us. A non-programming jam could cover a multitude of activities, from a short idea generation jam, to a jam based around storyboards or even something for creating board games, your students will still pick up the same Smart Skills from the jam activity.

They also open up collaborative opportunities with your schools' creative departments. Art and music students could have their own jam, and the resulting assets must be used in the CS students' games as part of their jam.

After the Jam

For a jam hosted towards the end of a school term or year, an extra addition to the main event could be to follow it with a student showcase. This could even form part of the judging process!

Invite students from other classes to try out your students' games and pick their favourite! This also provides an opportunity for your students to talk to their peers about their game, further developing their communication skills. A Students' Choice award might be a good addition to the results of your jam!

Game jams outside of school

Game jams are hugely popular both as in-person and online events, so if you want to show your students an example, or if some of them really take to the idea, there are plenty of places to jump into jamming.

Global Game Jam

One of the largest and most famous in-person jams is Global Game Jam which happens every year in January. From the Global Game Jam website:

> *Participants work concurrently around the globe; we rally around a central theme and then work together to create a game. It's our hope that we will see some very experimental prototypes that you can continue to work on after the jam. Many games developed in previous Game Jams have become fully realized games.*

The jam itself runs on a 48-hour time window with the theme announced just prior to the start of the event, but in-person sites are allowed to pick a time period within seven days to allow for more flexibility. A site can choose to run the 48 hours consecutively or spread across the seven days. You can also choose to jam online if there are no sites near you.

There are no specifications on what tools or programs you need to use for GGJ so you can jam however you like. Though it's also worth bearing in mind that projects submitted are released under a Creative Commons license.

Ludum Dare

Ludum Dare is a huge, online-only jam that runs twice a year, usually in October and April. The event often runs several formats simultaneously, all using the same theme. Themes are voted on publicly, going through several rounds of eliminations before settling on the final theme.

The Jam is your standard Jam format with a 72-hour deadline. Participants can join solo or as part of a team and should be mostly from scratch. Some preexisting audio and graphics can be used, but jammers must opt out of the Graphics and Audio categories. Games will be scored with enough feedback.

The Compo is a shorter jam that requires you to share your source code. Participants can only enter solo and have just 48 hours to build their game from scratch. Again, games will be scored with enough feedback.

Finally, a recent format addition: **Extra**. This is a three-week deadline, and jammers can take as few or as many days as they need to finish their game. Similar to the Jam format, it can be entered solo or as part of a team and games should be made mostly from scratch, opting out of the Audio/Graphics categories as necessary. Games will not be scored, but if you submit early and give feedback to others, your game will get its own feedback.

Formats can be changed at any time; it's only specified upon submission.

Ludum Dare has spawned some major indie hits including Hollow Knight, Inscryption and Friday Night Funkin'.

Itch.io

If your students are looking for smaller jams, why not take a look at itch.io. Itch is a great place to find indie games, but also to host game jams.

You can browse featured and past jams using their handy calendar and filter by number of participants or the jam duration so you can find an experience to suit you. Some jams to look out for include GMTK Game Jam, Brackeys Game Jam and Kenney Jam.

Final Thoughts

And that concludes our jamming resource! Hopefully you've got some great ideas for jams in your own classrooms.

If you do decide to run a jam activity with your students or have any feedback on this resource reach out to us over on Bluesky, or on our Education Forums. We'd love to hear from you!