AI Content Creation For Productivity

IMPORTANT LOGIN INFORMATION FOR THE CLASS:

Google account

1. **Sign in to your Google account**.
2. If you don't have one, go to https://accounts.google.com.sg/ and click "Create account". Follow the steps to set up a new account.
3. **Verify your account** by following the prompts to use your phone number or email.

Gemini (For access to Nano Banana):

1. **Go to browser:** Type in "https://gemini.google.com/app" in the address bar and press Enter.
2. **Log In:** Select Sign in
3. Select your Google account and enter your password.

Google Labs:

- **Go to browser:** Type in "https://labs.google/fx/tools/flow" in the address bar and press Enter.
- **Log In:** Click Sign In with Google
- Select your Google account and enter your password.

Suno:

- **Go to browser**: Type in https://suno.com/ in the address bar and press Enter.
- **Log In**: Select Continue with Google
- Select your Google account and enter your password.

Learning Activity 1 - Image Generation with SCENE

Inspiration Bank

Subject	People - child, teen, adult, elder, toddler Objects -camera, watch, building, school, restaurants Animals - cat, dog, jellyfish, dragon, fox, dolphin
Context	Occasions- bamboo forest, desert dunes, snowy peak, café window, market street Time/Weather - dawn, golden hour,, midnight, foggy, stormy, snowfall Background Elements - skyline, neon billboards, cherry blossoms, lighthouse
Emotions	Calm - serene, tranquil, contemplative, gentle, soothing Positive - hopeful, joyful, triumphant, playful, heartwarming Tense - suspenseful, brooding, ominous, wistful, lonely Energetic -dynamic, exhilarating, fierce, spirited, electrifying
Narrative	Actions - gazing, reaching, running, performing, repairing, negotiating Interactions - feeding a koi, guiding a child, releasing lanterns, tending a garden
Effect	Styles -anime, manga, Pixar-like, Studio Ghibli-inspired, fantasy Photography style – portrait, food, street, event, travel, wildlife

SKILLS DEVELOPMENT ACADEMY

Generate images with Nano Banana, ***Example Final Prompt:***

"A curious child in a cozy, sunlit kitchen, with a feeling of warmth and joy, playing with a ball of yarn, in the style of a colorful children's book illustration."

Draft your prompt with the SCENE Framework based on any of the below subjects:8

- Basketball
- House
- Man / Woman / Child
- Food
- Fruit

SCENE – Subject, Context, Emotions, Narrative, Effect

Example of SCENE framework below

Scenario: Photorealistic image of a barista at work

Subject Clearly describing who or what the main focus of your image is.	An asian barista in his 30s at work
Context Describe the setting and environment where your subject is	In a modern cafe
Emotion Define the mood and atmosphere you want the image to convey	Feeling focused, calm and cheerful
Narrative Explain what is happening in the scene or what the subject is doing	Preparing a cup of coffee behind the counter while interacting with customers
Effect Portrait, Travel, Street, Choose the visual style or final look of the image	Portrait photography style, hyper real, 8k, 16:9

Draft your prompt with the SCENE framework below

Subject Clearly describing who or what the main focus of your image is.	A little girl at the age of 5 years old.
Context Describe the setting and environment where your subject is	Sitting on a bench in a park next to a pond.
Emotion Define the mood and atmosphere you want the image to convey	Feeling relaxed and joyful.
Narrative Explain what is happening in the scene or what the subject is doing	Playing with her iphone.
Effect Portrait, Travel, Street, Choose the visual style or final look of the image	In the style of landscape, 16:9. Pixar-like. 8k.

Learning Activity 2 - Image Generation with DARTS

SKILLS DEVELOPMENT ACADEMY

Inspiration Bank

Depth of Field	Shallow DOF: blurred background, soft backdrop Deep DOF: everything sharp, clear background
Angle	Eye-level Low angle / worm's-eye (looks powerful) High angle / bird's-eye (looks small)
Range of Exposure	Balanced exposure/long exposed Underexposed / overexposed
Type of Shot	Close-up Medium shot Full body Wide / long shot
Source of Light	Natural: sunlight, golden hour, , window light Artificial: LED, neon, fluorescent, candlelight, firelight Mood: warm, cool, moody, dramatic, gentle

DARTS – Depth of field, Angle, Range of Exposure, Type of shot, Source of Light

Example of DARTS framework below

Scenario: Photorealistic image of a cyclist riding along the pavement beside a city street at night

Depth of Field Shallow vs deep depth of field	Shallow depth of field, cyclist in focus
Angle Camera point of view: eye-level, low, high, aerial	Worm's-eye view
Range of Exposure Balance exposure / Overexposed	Slightly underexposed for a moody night feel
Type of Shot Close-up, mid-shot, wide shot	Wide shot showing the cyclist and surrounding city
Source of Light Lighting style: natural, moody, soft, dramatic	Artificial neon street lights and vehicle headlights

Draft your prompt with the DARTS framework below

Choose <u>ONE</u> of the following prompts and generate the image in Nano Banana:

- A family walking by Marina Bay Sands
- A child flying a kite at East Coast Park during sunset
- A street food vendor cooking at a busy night market

Scenario: A family walking by Marina Bay Sands in the night with northern lights in the background.

Depth of Field Shallow vs deep depth of field	Deep depth of field
Angle Camera point of view: eye-level, low, high, aerial	Eye level
Range of Exposure Balance exposure / Overexposed	Underexposed
Type of Shot Close-up, mid-shot, wide shot	Wide shot
Source of Light Lighting style: natural, moody, soft, dramatic	Soft light

Learning Activity 3 - Putting it All Together

Inspiration Bank (ADD FRAMEWORK)

Add Subjects / Objects	Person: Man, woman, people, crowd etc Animal: Dog, cat, bird, fish, etc. Object: Chair, table, book, lamp, flower, bridge, wall, drink, Nature: Forest, beach, desert, ocean
Describe Details	Size: Small, large, tiny, huge, giant Color: Red, blue, green, yellow, black Texture: Smooth, rough, soft, hard, fluffy Shape: Round, square, triangular, oval, rectangular Mood - Happy, sad, angry, joyful, serene, calm, excited, curious,
Define Placement and Interaction	**Placement** Above, below, next to, beside, in front of, behind, on, under, near, far Direction: Towards, away from, facing, leaning against, pointing at Position: Slightly, directly, partially, completely etc **Interaction** Relational: Interacting with, looking at, playing with, talking to, connected to,, holding hands with Action: Running alongside, jumping over, sitting on, standing near Emotional: Enjoying, observing, contemplating etc

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ADD – Add subjects/objects, Describe details, Define placement and interaction

Example of ADD framework below:

Scenario: A young woman sitting on a park bench reading a book

Add Subjects / Objects Introduce new characters, animals, or objects.	Add a baby panda near the woman
Describe Details Specify appearance, features, or actions of added elements.	The baby panda is eating a bamboo shoot and wears a straw hat. The woman is asian, black framed glasses, short black hair, white blouse, denim jeans.
Define Placement and Interaction Position new elements within the scene and describe interactions with existing subjects.	The baby panda is resting beside the woman on the bench, both of them are in a Singapore park.

Use the ADD framework:

Choose ONE of the following prompts and generate the image in Nano Banana:

- A quiet beach with gentle waves and colourful umbrellas
- An office meeting room with a presentation screen and chairs
- A kitchen with a table and cooking equipment
- A desert surrounded by sand dunes and sunset

- A school classroom with desks, a whiteboard and large windows

Refine the prompts using the template below

Add Subjects / Objects Introduce new characters, animals, or objects.	Add Doraemon into the picture.
Describe Details Specify appearance, features, or actions of added elements.	Doraemon is wearing an apron, stirring the pot of spaghetti.
Define Placement and Interaction Position new elements within the scene and describe interactions with existing subjects.	Doraemon is standing at the hob facing the camera.

Learning Activity 4 - Digital Mood Board Creation

Example of **Moodboard Creation** below:

Theme	Interior Design Concept for Modern Home Study Room
Style	Modern minimalist
Lighting	Soft natural daylight with warm desk lighting
Colour & Material	Light wood, white, beige, glass
Feeling	Calm, focused, organised

Use Final Prompt:

*Create a digital moodboard of at least 4 images for a **modern home study room** in a **minimalist style,** with **soft natural daylight and warm desk lighting**, using **light wood, white, beige and glass materials**, showing a **calm, focused and organised feeling***

Create a moodboard with Nano Banana based on your chosen theme.

Choose <u>ONE</u> of the following themes:

- Interior Design Concept for an HDB Flat (Modern, Scandinavian, Smart home)
- Interior Design for Retail Shop (Fashion, Hair Salon, Sports)
- Product Design Concept for Headphones (Gaming, Premium, Eco-friendly)
- Product Design Concept for Backpack (Travel, School, Hiking)

Use the following prompt to create your moodboard:

*Create a digital mood board of at least 4 images for [**theme**], in [**style**], with [**lighting**], using [**colour/material**], showing a [**feeling**].*

Inspiration bank (Choose 1–2 words from each category)

Style: *minimalist, modern, contemporary, Scandinavian, Japandi, industrial, luxury, retro, vintage, futuristic, rustic, sporty, playful, elegant, premium, eco-friendly, tech-inspired, urban, classic*

Lighting: *warm, cool, soft, bright, natural, diffused, ambient, moody, dramatic, neon, backlit, studio lighting, golden-hour, high-contrast, low-light*

Colour / Material: *wood, metal, glass, leather, fabric, canvas, plastic, recycled material, aluminium, stainless steel, rubber, stone, concrete, marble, rattan, pastel, neon, neutral, earthy, monochrome, bold, metallic, matte, glossy*

Feeling: *calm, happy, bold, relaxed, cosy, dreamy, energetic, premium, sophisticated, playful, adventurous, sporty, futuristic, welcoming, clean, youthful, professional, luxurious, natural, creative*

Share your mood board with the class.

Create your **Moodboard** using the template below:

Theme	Product Design Concept for Backpack (Travel, School, Hiking)
Style	Modern
Lighting	Dramatic
Colour & Material	Rose Gold / Pink
Feeling	Creative

Use Final Prompt:

Create a digital mood board of at least 4 images for a hiking backpack, in modern, dramatic, using rose gold and pink material, showing a creative feeling.

Learning Activity 5 - Rewriting Prompts to Reduce Bias with FAIR

- **Identify the biases in the images generated by AI Tools in the following slides.**
- **Rewrite the prompts with FAIR.**
- **Generate the images again with the FAIR prompt and compare the results.**

Rewriting Prompts to Reduce Bias with FAIR	
Original prompt: Create an image of people in office Rewrite prompt: Create an image of a diverse group of people, both males and females, with different ethnicities and ages (30-50) working in office.	

Rewriting Prompts to Reduce Bias with FAIR	
Original prompt: Create an image of a nurse taking care of a patient. Rewrite prompt: Create an image of a diverse group of 2 nurses and 1 doctor, different ethnicities and ages, taking care of a patient in Singapore hospital.	

Rewriting Prompts to Reduce Bias with FAIR	
Original prompt: Create an image of a group of friends using AI tools Rewrite prompt: Create an image of a diverse group of friends, different ethnicities and ages, using AI tools in a HDB flat.	

Learning Activity 6 - Natural Language Processing

This prompt was used to generate the image on the following slide:

"A happy group of friends enjoying their meals at the Singapore hawker center, everyone smiling and their hands waving at the camera, ultra-realistic photo."

Study the image on the next slide carefully and identify any issues you spot

- Look closely at the hands, fingers, arms, and faces.
- Circle or note anything that looks strange, distorted, or unrealistic.

Rewrite the prompt below to fix the issues (i.e. distorted hands, unnatural proportions)
A happy diverse group of six friends, males and females, different ethnicities and ages (30 to 60) enjoying their meals at the Singapore hawker center, everyone smiling and their hands waving at the camera, each person has one head, two arms, five fingers on each hand clearly, visible, natural proportions, natural light, ultra-realistic photo.

SKILLS DEVELOPMENT ACADEMY

Inspiration Bank

Subject & Setting	People - child, teen, parent, teacher, hero, elder Creatures/objects - dog, cat, koi, dragon, drone, vintage camera Places - classroom, café, market street, rooftop, beach, hospital Time/conditions - dawn, golden hour, night, rainy
Theme / Tone	Hopeful, joyful, calm, romantic, playful, mysterious, tense, somber, heroic,inspirational, comedic, gritty, whimsical
Obstacles / Action	Obstacles - deadline, broken device, locked door, file, traffic jam, power cut etc Actions - searching, negotiating, rescuing, escaping, hiding, competing, teaching, comforting, celebrating
Recording Angle	Camera Angles: Eye level, low angle, high angle, dutch angle, first-person point of view Shot Types: Extreme close-up, close-up, medium shot, full-body shot, wide shot, aerial shot Camera Movement: Pan left / right, Dolly in / out, Tilt up / down, Tracking shot
Yield Creativity	Style - anime, watercolor, claymation, pixel art Twist - time loop, hidden message, tiny-to-giant scale, dream sequence Motifs - cherry blossoms, neon signs, lanterns, jellyfish glow, origami shapes

- Based on your image generated from the SCENE + DARTS + ADD prompt, animate it in Flow
- Use the template to fill in your STORY
- Follow instructions in the next slide to animate your image using Flow
- Share your creation with the rest of the class

Example of STORY framework in Google FLOW

Scenario: A boy finds a lost dog at the beach

Subject & Setting Define the main character(s) and environment	A 3D cartoon of a young boy walking alone at a beach during golden hour
Theme / Tone Decide the mood or emotional tone	Hopeful, warm and emotional
Obstacles / Action What is happening? What's the story?	He notices a lost dog near the water, approaches slowly, then comforts it. He speaks in english: "Hey there little buddy, are you lost?"
Recording Angle From what camera angle should the scene be recorded?	Start with a wide eye-level shot, then move into a medium tracking shot as he walks toward the dog He then ends off by saying : "Come, let's bring you back."
Yield Creativity Combine elements creatively for originality	Add a magical twist at the end: glowing sparkles and heart shaped elements slowly appear around them as the boy hugs the dog.

Draft your prompt with the STORY framework below

Subject & Setting Define the main character(s) and environment	Nicole Kidman is driving a red Ferrari on the highway with the Marina Bay Sands in the background.
Theme / Tone Decide the mood or emotional tone	Tense, heroic, inspirational.
Obstacles / Action What is happening? What's the story?	She drove and stopped at the entrance of Garden by the Bays. She then came out of the car and said: "Want to know my secret of success?"
Recording Angle From what camera angle should the scene be recorded?	From a wide angle shoot, it moves to eye level angle as she came out of the car. She says, "Because I'm a CSIS member".
Yield Creativity Combine elements creatively for originality	Hyper-realistic.

Learning Activity 8 – SOUND FRAMEWORK - Text-to-Music with Suno

SKILLS DEVELOPMENT ACADEMY

Inspiration Bank

Style / Genre	Pop, R&B, hip hop, drum & bass rock, country, jazz, blues, funk, soul, K-pop, classical, orchestral
Overall Mood / Emotion	Happy, upbeat, inspiring, hopeful, triumphant, calm, romantic, warm, cozy
Use of Instruments	Piano, electric piano, electric guitar, bass guitar ,strings (violin/viola/cello), brass (trumpet/trombone) ,woodwinds (flute/clarinet)
Narrative Tempo / Rhythm	Tempo (BPM): slow 60–80, mid 90–110, pop 110–128, dance 120–130, fast 140+ Motion words: gentle rise, steady pulse , driving beat, dramatic build
Details on Vocals / Lyrics	Vocal presence: lead vocal (male/female/child/choir) Language/tone: English, Mandarin, Malay, Tamil Tone : warm, corporate, friendly, playful, inspirational Themes: teamwork, resilience, gratitude, celebration, motivation, love

- Choose <u>ONE</u> of the following genres and fill in the template for the SOUND framework
    - Ballad
    - Rock & Roll
    - Hip Hop
    - R&B
    - Pop

- Follow the instructions in the next slides to create your song on Suno

Example of SOUND framework in Suno

Style / Genre What kind of music? (pop, classical, hip hop, jazz, EDM, lo-fi, cinematic, rock, ambient, etc.)	Modern pop with light R&B and electronic influences
Overall Mood / Emotion What feeling should the music create? (happy, sad, tense, romantic, inspiring, mysterious,energetic)	Upbeat, feel-good, youthful and energetic
Use of Instruments Which instruments or sounds should be included? (piano, guitar, violin, drums, synths, choir, bass, flute, etc.)	Synths, punchy drums, bass, light piano and electronic effects
Narrative Tempo / Rhythm How fast/slow should it be? (slow tempo, upbeat rhythm, dramatic buildup, steady beat, etc.)	Mid-to-upbeat tempo with a catchy groove and strong chorus
Details on Vocals / Lyrics Do you want lyrics or just instrumental? If lyrics, what theme?	Male or female vocal, simple catchy lyrics in english about food, city life, late-night outings and enjoying everyday moments in Singapore

Draft your prompt with the SOUND framework below

Style / Genre What kind of music? (pop, classical, hip hop, jazz, EDM, lo-fi, cinematic, rock, ambient, etc.)	Pop
Overall Mood / Emotion What feeling should the music create? (happy, sad, tense, romantic, inspiring, mysterious,energetic)	Inspiring, romantic
Use of Instruments Which instruments or sounds should be included? (piano, guitar, violin, drums, synths, choir, bass, flute, etc.)	Piano and harp
Narrative Tempo / Rhythm How fast/slow should it be? (slow tempo, upbeat rhythm, dramatic buildup, steady beat, etc.)	mid 90-110, gentle rise
Details on Vocals / Lyrics Do you want lyrics or just instrumental? If lyrics, what theme?	Female vocal, Mandarin, playful, love, content is about a lady who is a schizophrenia patient giving thanks to God for His peace and no more hearing to voices.

Learning Activity 9 - Refining CLEAR Prompts

Rewritten Prompt Below:
1. Create photorealistic image of a Indonesian farmer working under the hot sun in a paddy rice field with tattered clothes and a sad face. 2. Make a hyper-realistic portrait of a group of young teenage girls in bikini playing volleyball at the East Coast beach. 3. An image of Black Pink members arguing with each other behind the concert backstage.

Example of CLEAR framework to check for Ethical Prompting

Scenario: Create a photorealistic image of Taylor Swift working as a cashier at a Singapore hawker centre during lunchtime.

	Description	**Type Yes / No in the boxes below**
Check originality	Is the image idea an original creation?	Yes
Language sensitivity	Does the prompt treat people fairly, without stereotypes about race, gender, age, or culture?	No
Ethical references	Does the prompt copy an existing artwork, style, or photo without giving credit?	No
Appropriate themes	Could this image idea make people uncomfortable, or include discrimination, hate, harm, or sexual content?	Yes
Respect boundaries	Does the prompt remove the real people's names or faces, or single out a race or group?	No
Rewritten Prompt using CLEAR framework	*Create a photorealistic image of a cashier at a Singapore hawker centre during lunchtime.*	

Use the template in the next step to refine the prompt ethically using the CLEAR framework

Scenario: An image of Black Pink members arguing with each other behind the concert backstage.

	Description	**Yes / No**
Check originality	Is the image idea an original creation?	Yes
Language sensitivity	Does the prompt treat people fairly, without stereotypes about race, gender, age, or culture?	No
Ethical references	Does the prompt copy an existing artwork, style, or photo without giving credit?	No
Appropriate themes	Could this image idea make people uncomfortable, or include discrimination, hate, harm, or sexual content?	Yes
Respect boundaries	Does the prompt remove the real people's names or faces, or single out a race or group?	No
Rewritten Prompt using CLEAR framework	*An image of a group of artists or band members (do not resemble any public figures or artists) arguing with each other behind the concert backstage.*	