**Responsive Mobile First Design Guidelines**

1. Core Breakpoints (Mobile-First Approach)

Use these standard breakpoints as a starting point (adjust based on project analytics):

|  |  |  |
| --- | --- | --- |
| Device Type | Breakpoint Range | Use Case |
| Mobile (Default) | 0px - 479px | Small smartphones |
| Phablet | 480px - 767px | Large smartphones, small tablets |
| Tablet | 768px - 1023px | Portrait tablets |
| Laptop | 1024px - 1279px | Small laptops/desktops |
| Desktop | 1280px - 1919px | Standard desktops |
| Large Desktop | 1920px+ | 4K/UHD monitors |

2. Typography Guidelines

* Base Font Sizes:
  + Mobile: 16px (body), headings scale down proportionally.
  + Desktop: 18px (body), headings scale up (e.g., h1: 2.5rem).
* Line Height: 1.5–1.6 for body text; tighter for headings (1.2–1.3).
* Font Weights:
  + Body: 400 (light mode), 500 (dark mode for better contrast).
  + Headings: 600–700 (avoid 800+ for readability).
* Responsive Fonts: Use clamp() for fluid typography:

 p { font-size: clamp(1rem, 2vw, 1.2rem); }

3. Spacing & Layout

* Margins/Paddings:
  + Mobile: Smaller spacing (8px, 16px increments).
  + Desktop: Larger spacing (24px, 32px increments).
* Grid Systems:
  + Use CSS Grid/Flexbox for layouts.
  + Max container width: 1440px (with margin: 0 auto).
* Whitespace: Ensure 20–30% of screen is whitespace on larger screens.

4. Media Query Structure

/\* Mobile (default styles) \*/

body { ... }

/\* Phablet: 480px+ \*/

@media (min-width: 480px) { ... }

/\* Tablet: 768px+ \*/

@media (min-width: 768px) { ... }

/\* Laptop: 1024px+ \*/

@media (min-width: 1024px) { ... }

/\* Desktop: 1280px+ \*/

@media (min-width: 1280px) { ... }

/\* Large Desktop: 1920px+ \*/

@media (min-width: 1920px) { ... }

5. Image & Media Rules

* Fluid Images:  img { max-width: 100%; height: auto; }
* Art Direction: Use <picture> with srcset for different resolutions.
* Aspect Ratios: Use aspect-ratio property to prevent layout shifts.

6. Touch & Interaction

* Touch Targets: Minimum 48px × 48px for buttons/links.
* Hover States: Include non-hover fallbacks for mobile (e.g., tap states).
* Form Elements: Ensure inputs are 16px+ to prevent mobile zoom.

7. Navigation Responsiveness

* Mobile: Hamburger menu (always visible).
* Desktop: Horizontal menu (hide hamburger).
* Dropdowns: Use click/tap events (not hover-only).

8. Performance & Optimization

* Breakpoint-Specific Assets: Load images/videos only for relevant viewports.
* Lazy Loading: Use loading="lazy" for offscreen images.
* CSS/JS: Minify and split code by breakpoint if needed.

9. Testing Checklist

* Test on real devices (iOS, Android, tablets).
* Use Chrome DevTools device emulator.
* Check portrait/landscape orientations.
* Validate contrast ratios (WCAG AA/AAA).

Example CSS Framework Snippet

:root {

--primary-color: #2A5C82;

--spacing-unit: 16px;

}

.container {

width: 95%;

max-width: 1440px;

margin: 0 auto;

padding: var(--spacing-unit);

}

.grid {

display: grid;

gap: var(--spacing-unit);

grid-template-columns: repeat(auto-fit, minmax(300px, 1fr));

}

@media (min-width: 768px) {

.grid { grid-template-columns: repeat(2, 1fr); }

}

@media (min-width: 1024px) {

.grid { grid-template-columns: repeat(3, 1fr); }

}